

small air forces observer

vol. 37 no.2 (146)
October 2013

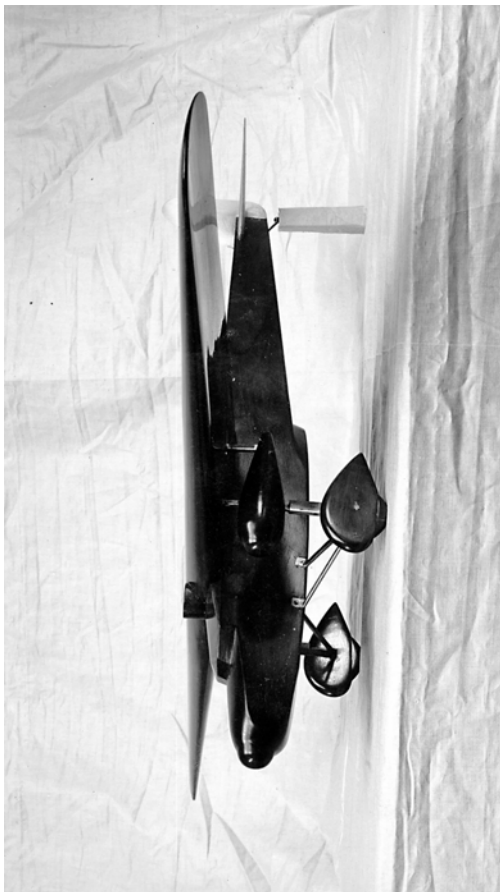
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Mexican Air Force Serials 1937-1943: Part 2
Czechoslovak Avia-Fokker/Avia F.IX
Spanish Boeing Peashooter: Part 1
Mosquitoes Abroad

vol. 37 no.2 (146)

October 2013



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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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COVER COMMENTS: This close-up of a Czechoslovakian-built Fokker F.IX serves as an introduction to the article on the service of this three-engine bomber in the Czechoslovak Air Force that begins on page 52. (Photo via José Fernandez of Artipresse.)

BACK ISSUES: Back issues are available for all issues of the SAFO at \$3.00 for both original issues and high-quality Xerox copies of out-of-print issues. Add postage for all orders. For a list of all issues and their content, send an e-mail request or \$1.00 for snail mail to the editorial office.

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"Mario Overall and I have decided to do a detailed monograph on Operation PBSuccess, the 1954 CIA-back 'invasion' of Guatemala. We think the time might be right. I'd be grateful for any tips or contacts you can recommend. We feel pretty confident about our documentary content, but would like more photos. Any help most appreciated.

Dan Hagedorn (SAFCH #394), USA.

"SAFO #145 arrived today, 29 June. Looks like another fun issue - despite its being a sort of 'South of the Border Special,' with twenty and a half pages devoted to just Latin America. It is interesting to view so many Mexican aircraft all in one place. Might be nice to

see drawings of some of these to show color (and other) details. Also intriguing are the two shots of the Mexican Bristol F2Bs with the reversed positioning of the upper wing insignia - point forward! Was this simply(!) a manufacturer's error prior to delivery?

Ted Koppel (SAFCH #118), USA.

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION

(APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at iansharyn@bigpond.com.au. Web Site: www.apma.org.

1-13 (28 pages) "EA-18G Growler" 3 pages inc. 3 color photos RAAF FA-18F and 2 profile drawings of proposed RAAF EA-18G.

AUSTRIA

ÖFH NACHRICHTEN (Österreichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.

2/13 (44 pages) "Nord 1203 Norecrin" 3 pages inc. 4 photos on Austrian civil Norecrin. "Austrian Airlines Vickers 837 Viscount: 1. Teil" 12 pages inc. 15 b&w photos, 2 color photos, and 5 color profile drawings (3 Austrian Airlines, one Royal Aircraft Establishment, & one Urraca Colombia).

CZECH REPUBLIC

Revi These and other issues are available from SAFCH Sales Service: \$7.00 per issue plus postage.

#76 (60 pages)

FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 71 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#193 Mai/Juin 2013 (96 pages) "Les patrouilles DAT en 1940" 20 pages incl. 20 photos. "Flanker dans le monde" 16 pages incl. 37 photos (all Russian). "14/18 Giovanni Ancillotto" 14 pages incl. 21 photos and one color profile drawing (Italian Nieuport 17). "Yakovlev Yak-2/Yak-4" 25 pages, 31 photo, 5 color profile drawings, numerous side view line drawings, and a two-page 1/72-scale drawing. "Hubert de Chezelles, le Preux Chevalier" 13 pages incl. 18 photos and 2 color profile drawings (D.520). "Pioneers: i'Ecrevisse de Moisant" one page incl. 4 photos.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlief Billig, Oraniendamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#40 (114 pages) "Wer war der Erste?" 6 pages inc. 20 photos (a/c of Wright, Langley, Whitehead, & Santos-Dumont). "Reichenberg die bemannte Selbststopfer-Bombe" 22 pages inc. 27 photos, one full-page 3-view drawing, 6 side-view drawings of 1- and 2-seat V-1, & 3 color profile drawings). "Sowjetische Bomber uber Berlin" 24 pages inc. 44 photos and four 3-view drawings (DB-3, Il-4, Pe-8, & Jer-2), and a color profile drawing of Jer-2. "Messerschmitt-Projekte" 24 pages inc. 34 photos (Me 163, Me 262, Me 263, Me P 1101, Me 264, Me P 1075, Me P 1085, Me 1108, & Me P 1101). "Die Sowjets in Afghanistan" 17 pages inc. 36 photos (Afghan Su-22, MiG-21, Mi-17, Mi-35, & Mi-25).

#41 (114 pages) "Weisskopf kontra Wright" 20-page debate on who flew first, Whitehead or Wright, inc. 23 photos. "Deruluft" 14 pages on German-Russian airline inc. 31 photos (Fokker F III, Dornier Merkur, & ANT-9, all w/ RR- registration) "Deserteure und die Bucker Bu 181" 12 pages on Bu 181 in Switzerland inc. 26 photos. "Am Rande des Nuklearkrieges" 20 pages on NATO's use of the autobahn as emergency airfields inc. 37 photos (mostly Dutch & West German F-104s). "Sowjetische Luft-Luft-Raketen" 29 pages inc. 43 photos and scale drawings of Soviet Air-to-Air Rockets.

ITALY

JP4 Menslie di Aeronautica e Spazio. Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Aprile 2012 (100 pages) Color photos: Oman C-130J '525' & India Alouette II. "Cartolina da Zurigo" 2 pages inc. 7 photos of military a/c (Malaysia Airbus 319, Mexico Gulfstream G-IV, Panama Embraer Legacy 600, Tanzania Gulfstream G550, & South Africa Boeing 737). "Cobra Gold 2013" 2 pages with 6 photos (Thai L-39 Albatros, F-16, C-103H, & F-5E). "Lo sfortunato aereo di

Tita Marzuttini" 3 pages incl. 5 photos of 1910 monoplane. "Incidenti Militari" 1½ pages inc. 5 photos (Azerbaijan Mi-8 & Peru Schweizer 300C).

Maggio 2013 (100 pages) "I 100 anni di Alenia Aermacchi" 6 pages inc. 16 photos. "Air Tractor colombiani contro la coca" one page incl. 3 photos. "La Compagnia Aero Maritima Mallorguina" 6 pages inc. 14 photos of early flying boats. "Incidenti Militari" one page incl. 4 photos (Uruguay Pucara & Mauritania EMB-312).

Giugno 2013 (100 pages) "Aerei in autostrade in Bielorussia" ½ page w/ 4 photos (Su-25 & Su-27). "Gli ultimi Phantom tedeschi" 6 page inc. 5 photos. "Il Museo Aeronautico di Belgrado" 4 pages inc. 12 photos (Ju-52, Bf 109G, Ikarus S-451 & S-49C, Il-2, and Fiat G.50). "Incidenti Militari" 1½ one pages inc. 4 photos (Kazakistan MiG-31B).

Luglio 2013 (100 pages) "Incidenti Militari" 1½ one pages inc. 4 photos (Jordan Slingsby T.67M, Taiwan Mirage 2000 '2052', Brazil KC-137 '2404', & China Harbin SH-5 '9113').

USA

IRANIAN AVIATION REVIEW Top Kit Publishing. Quarterly. Entirely in English. \$12.00 per issue. www.iranianaviation.com.

#1 (24 pages) "News and Updates" 2 pages with 14 photos. "IRINA: Islamic Republic of Iran Naval Aviation" 8 pages on the "history, current status and equipment of the HAVADARYA (Air-Sea) Command" including color photos, a map showing main bases, and Order of Battle. "F-84G Thunderjet: Iran's First Fighter" 4 pages including 10 photos, list of s/n, and color profile drawings. "Iranian Airways: Iran's first true airline 1936-1946 (Part 1)" 4 pages including 10 photos and fleet list. "Timeline of Aviation in Iran (Part1); Junkers Luftverkehr Persien" 2 pages including 8 photos. "Gendarmerie Aviation: Iran's Paramilitary Aviation force" 3 pages including 10 photos, list of s/n, and 5 color profile drawings (Cessna Seneca, 185, & 310; Bell 47G; and Westland Whirlwind S-55).

MEXICAN AIR FORCE 1937 TO 1943

MILITARY SERIAL NUMBERS ASSIGNED TO AIRCRAFT

Part 2

Santiago A. Flores

[Editor's note: Part 1 of this survey of Mexican Air Force serials from #1 to #63 appeared in SAFO #145.]

At this point of the story the numbering system would undergo some changes due to the arrival of new American-built general purpose aircraft. Ten Vought V-99M arrived on 13 February 1938 at the military airfield of Balbuena, near Mexico City, but without any numbers painted on their fuselages or rudders. The cost of each aircraft was US\$16,000.00. The pilots and mechanics that brought the aircraft to Mexico were led by Tte Corl. P.A. Rafael Montero of the Second Air Regiment. The construction number of the aircraft were: 1339-1348.



Fig. 38

On March 26, one of the Vought V-99M would be lost in fatal accident in the state of Chihuahua, killing its two crew members. Based on photographic evidence the V-99M's received the following FAM aircraft numbers: 34-35 and 37-44. The missing number could have been assigned to a V-99M lost at Chihuahua.

These aircraft were assigned to the 2/o.Air Regiment where they possibly took the place of lost Azcarate Corsario biplanes or aircraft that were later re-numbered. After this time Corsairs 64-68 started to appear in various pilot's log books. Another change noted in various pilot's log books was the latter A assigned to a number of Corsair aircraft as noted in the log book of Capt. P.A. Luis Noriega Medrano

from March to April 1938. Corsair or Corsario types he flew were: 42A, 38^a, 35B, & 38B. In May 1938, he flew Vought V-99M No.35. The log book of Tte Alfonso Gandarilla Gracia shows he flew the following Corsairs during the period of March to April 1938: 58A, 48A, 36A, 63A, 53A, 57A, 43A, & 59A. By May 1938, the letter "A" was removed from aircraft 59, 57, & 36.

- 64 Azcarate O2U-4^a Corsario. In service May 1940.
- 65 Azcarate O2U-4^a Corsario. In service July 1939. Later in service with the 1/o.Regimiento Aereo, Baja California, 1942-1943.
- 66 Azcarate O2U-4 Corsario (pilot's log book).
- 67 Azcarate O2U-4^a Corsario (pilot's log book). Later in service with the 1/o.Regimiento Aereo, Baja California, 1942-1943.
- 68 Azcarate O2U-4^a Corsario, March 1941. Aircraft number possibly assigned to a Howard DGA-8 captured from the rebel forces of General Saturnino Cedillo from San Luis Potosi 1938., Reportedly lost in accident.



Fig. 39

- 69 Howard DGA-8 captured from the rebel forces of General Cedillo 1938. Number later assigned to a Sikorsky OS2U-3 Kingfishers in 1942, 1/o.Air Regiment, April 1942, Baja California.



Fig. 40



Fig. 41

Later, the Mexican Air Force would acquire 22 Bellanca 28-90B Flash monoplanes that were suppose to go to the Spanish Republican Air Force. The first aircraft was flown in September 1939 and probably were assigned to the 1/o.Air regiment. But after two fatal accidents, the Bellancas were removed from service - probably after August 1940.



Fig. 42

By 1942, the engines of the surviving Bellancas were traded for the six Sikorsky OS2U-3 Kingfishers that were delivered in early 1942. As for the fuselages, they were sold to the US Navy to be used as training aids. During the 28-90B's brief service in the FAM, based on the few photos, none appeared to have had Mexican Air Force markings or aircraft serial numbers, and in their log books the pilots used the construction number to identify the aircraft they flew.



Fig. 43

Construction numbers of the Bellanca 28-90B's used by the Mexican Air Force: 971-992.

- 70 Sikorsky OS2U-3 Kingfisher, April 1942 assigned to 1/o.Air Regiment, Baja California.
- 71 Sikorsky OS2U-3 Kingfisher, April 1942 assigned to 1/o.Air Regiment, Baja California.
- 72 Sikorsky OS2U-3 Kingfisher April 1942 assigned to 1/o.Air Regiment, Baja California.



Fig. 44

- 73 Sikorsky OS2U-3 Kingfisher April 1942, assigned to 1/o.Air Regiment, Baja California.



Fig.45

- 74 Sikorsky OS2U-3 Kingfisher, April 1942 assigned to 1/o.Air Regiment, Baja California.

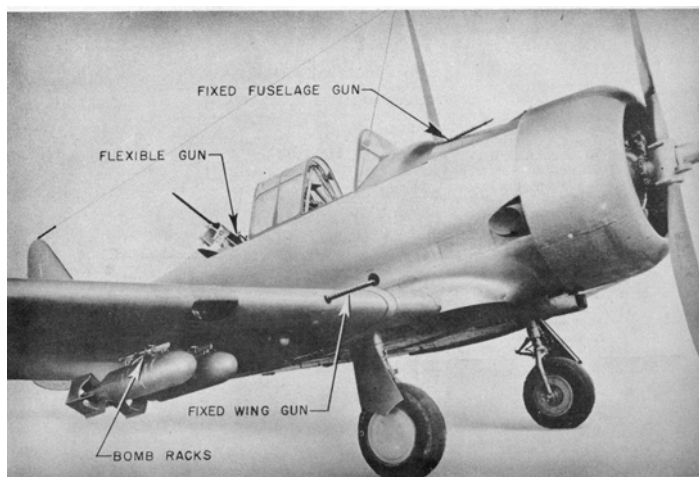


Fig. 46

Another change occurred with the arrival of the first North American AT-6B armed trainers, to undertake anti-submarine patrols in the Gulf of Mexico. A letter was assigned to the aircraft number to designate its role. In the case of the AT-6 it was the letter "P" for Patrulla (patrol). Later around 1943, a group of Sikorsky Kingfishers would be assigned the letters PS Patrulla Sikorsky (Patrol Sikorsky).



Fig. 47

P-75 North American AT-6B assigned to the 2/o.Escuadron Aereo, 2/o.Air Regiment, 1943.

P-76 North American AT-6B assigned to 2/o.Escuadron Aereo, 2/o.Air Regiment in 1943.

P-77 North American AT-6B assigned to 2/o.Squadron, 2/o.Air Regiment in 1942. It attacked a reported submarine on 22 May 1943 while being flown by Tte.P.A. Alfonso Gandarilla Gracia. 3/o.Escuadron Aereo, 2/o.Regimiento Aereo in 1943.

P-78 North American AT-6B assigned to 2/o.Escuadron Aereo 2/o.Air Regiment in 1942.

P-79 North American AT-6B assigned to 2/o.Escuadron Aereo 2/o.Air Regiment in 1943. Later to 1/o.Regimiento Aereo in March 1943.



Fig. 48

P-80 North American AT-6B assigned to the 2/o.Escuadron Aereo, 2/o.Regimiento Aereo in 1942. Attacked a German U-boat on July 5 1942 while being flown by Major P.A. Luis Noriega Medrano.



Fig. 49

The Mexican air force would receive two Beech AT-7 transport planes that arrived with a group of AT-6 armed trainers. These aircraft were numbered out of sequence with a reported "FAM-1" and "FAM-2". Some sources say they were used in costal patrols.

P-81 North American AT-6B.

P-82 North American AT-6B, 2/o.Escuadron Aereo, 2/o.Regimiento Aereo in 1942

P-83 North American AT-6B.

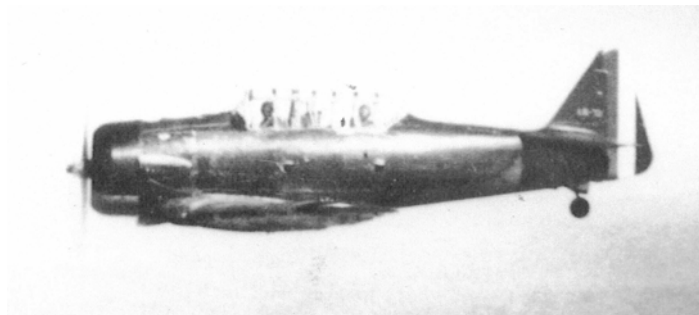


Fig. 50

P-84 North American AT-6B, 2/o.Regimiento Aereo, 1942. Later to 1/o.Regimiento Aereo, Ensenada BCN, March 1943.

P-85 North American AT-6C, 3/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1943.

P-86 North American AT-6C, 3/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1943.

P-87 North American AT-6C, 3/o.Escuadron Aereo, 2/o. Regimiento Aereo, 1943.

P-88 North American AT-6C, 1/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1942.

P-89 North American AT-6C, 2/o.Regimiento Aereo, 1943.

P-90 North American AT-6C, 1/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1942.

P-91 North American AT-6C, 2/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1942.

P-92 North American AT-6C, 2/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1942.
P-93 North American AT-6C, 2/o.Regimiento Aereo, 1943. Later to 1/o.Regimiento Aereo, March 1943 Ensenada BCN.
P-94 North American AT-6C, 2/o.Air Regiment, October 1942.
P-95 North American AT-6C.
P-96 North American AT-6C, 2/o.Regimiento Aereo, 1943.
P-97 North American AT-6C.
P-98 North American AT-6C.
P-99 North American AT-6C, 1o.Air Regimiento Aereo, Ensenada BCN, early 1943.
P-100 North American AT-6C.
P-101 North American AT-6C.
P-102 North American AT-6C.
P-103 North American AT-6C
P-104 North American AT-6C
P-105 North American AT-6C, 2/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1943. Later to 1/o.Regimiento Aereo, Ensenada BCN, March 1943.
P-106 North American AT-6C, 2/o.Regimiento Aereo, June 1943.
P-108 North American AT-6C made a flight from Mexico to Cuba and return in January 1943; pilot Tte. P.A. Radames Gaxiola Andrade.
P-109 North American AT-6C, 2/o.Regimiento Aereo, 1943.



Fig. 51

P-110 North American AT-6C, 2/o.Regimiento Aereo, 1943. Later to 1/o.Regimiento Aereo, Ensenada BCN, March 1943.
P-111 North American AT-6. Military Aviation School, 1943.
P-112 North American AT-6.
113 Sikorsky OS2U-3 Kingfisher, 2/o.Regimiento Aereo, Merida Yucatan, 1943.

P-114 North American AT-6, Military Aviation School, 1943.
P-115 North American AT-6, 3/o.Escuadron Aereo, 2/o.Regimiento Aereo, 1943.
P-116 North American AT-6, Mexico City, April 1943.
P-117 North American AT-6, Mexico City, April 1943.
P-118 North American AT-6, 2/o.Regimiento Aereo, 1943. Later 1/o.Regimiento Aereo, Ensenada BCN, March 1943. Military Aviation School, May 1943.
P-119 North American AT-6 Military Aviation School 1943.
P-120 North American AT-6, 2/o.Regimiento Aereo, 1943. Later 1/o.Regimiento Aereo, Baja California, March 1943.
P-121 North American AT-6, 2/o.Regimiento Aereo, June 1943.
P-122 North American AT-6, Military Aviation School, 1943.
123
124 EAN-124. North American AT-6, March 1943, 1/o.Regimiento Aereo, Ensenada BCN, March 1943; pilot Tte. P.A Carlos Varela Landini.
125
126
127
128
129 Sikorsky OS2U-3 Kingfishers. Delivered April 1943. Sources say OS2U-1. 2/o.Regimiento Aereo, Merida Yucatan, 1943.
130 Sikorsky OS2U-3 Kingfisher. Delivered April 1943. Sources say OS2U-1. 2/o.Regimiento Aereo, Merida Yucatan, 1943.
PS-131 Sikorsky OS2U-3 Kingfisher. Delivered April 1943 (PS: Patrulla Sikorsky). Sources say a OS2U-1. 2/o.Regimiento Aereo, Merida Yucatan, 1943.
132 Sikorsky OS2U-3 Kingfisher. Delivered April 1943. Sources say a OS2U-1, 2/o.Regimiento Aereo, Merida Yucatan, 1943.
133 Sikorsky OS2U-3 Kingfisher. Delivered April 1943. Sources say a OS2U-1. 2/o.Regimiento Aereo, Merida Yucatan, 1942.

In 1943, the Mexican Air Force underwent changes in its operation structure. By July 1943, the two Air Regiments were disbanded and individual squadrons were introduced. The aircraft numbering system was change as well due to the increase of

American-built aircraft entering service. After March 1943, a new identification and number series for Mexican Air Force aircraft was initiated ending the numbering system that began in the late 1920's.

For example, AT-6B P-75 became EAN-701 (Entrenador Avanzado North/Advanced Trainer North and an individual aircraft number). Kingfishers PS-131 became OZS-450x (Observation de Zona Sikorsky/Observation of Zone Sikorsky and four digit number).

Mexican Air Force Aircraft with Different Aircraft Serial Numbers.

It should be mentioned that a different set of serial numbers were assigned to aircraft that were flown by the Escuela Militar de Aviacion and also by transport and confiscated aircraft. These were either not numbered or did not receive the sequential Mexican Air Force aircraft serial numbers.



Fig. 52

A Stearman Model 81 received the serial number OJ1 and was reportedly flown by Colonel Samuel C. Rojas.

Escuela Militar de Aviacion



Fig. 53

In 1936, six Fleet 10-32D biplane trainers received numbers: E-1 to E-6.



Fig. 54

In 1938, 6 Ryan STM monoplane trainers received numbers 1 to 6.



Fig. 55

1940, the single Brumer-Winkle Bird C.K. biplane receive no s/n.

The Barrera biplane *20 de Noviembre* which was built in 1940 received no s/n,

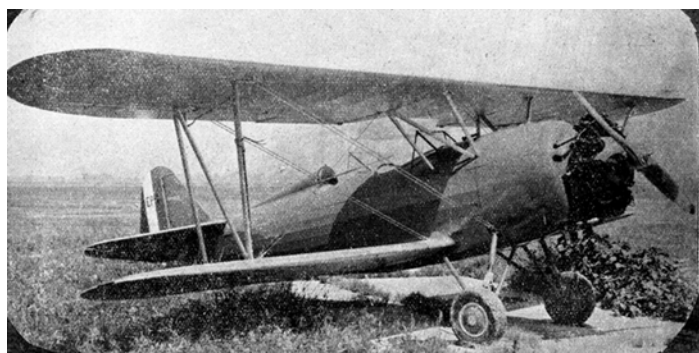


Fig. 56

Ten Barrera Ares EP biplane trainers built in 1941 received s/n: EP-1 to EP-10.

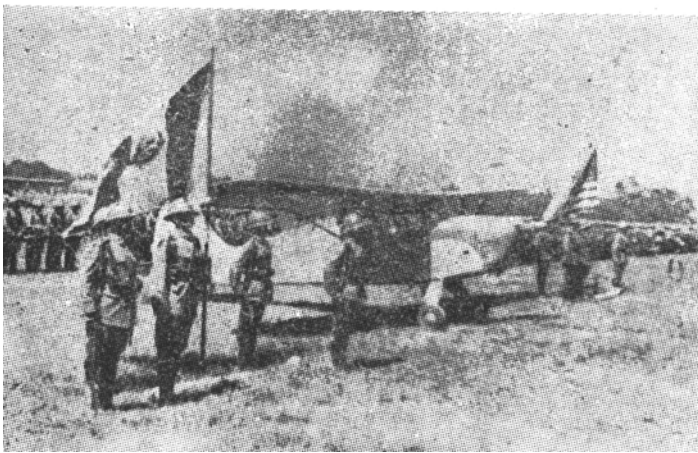


Fig. 57

In 1942, an Avioneta "Buddy" was donated by the American community in Mexico to the Mexican Air Force. It not receive a s/n.

Transport Planes:



Fig. 58

A Stinson SR-6B received in 1935. s/n Presidencial de la Republica "Plan Sexenial"



Fig. 59

Two Howard DGA-8 were confiscated from the rebel Cedillistas in 1938; s/n 68 and 69No.69



Fig. 60

A Lockheed L.12 Electra was flown by Mexican pilots in 1938. XB-ABN belonged to the SCOP, but was used in operations against the Cedillistas in 1938 and was later used in a long distance flight throughout Latin America.



Fig. 61

A Fairchild Model 82B was received in 1940. T-1002 came from a government agency and was transferred to the air force.

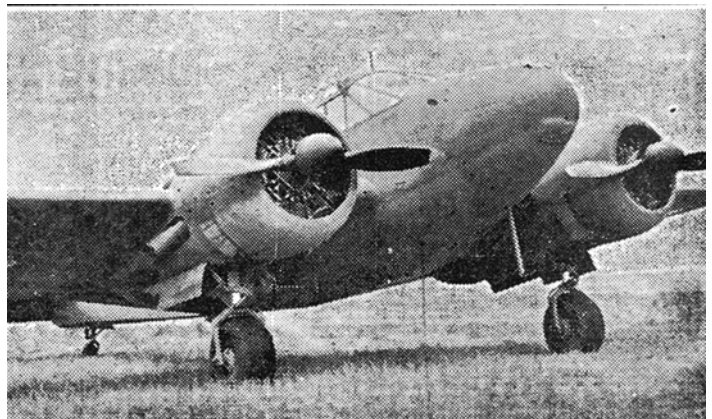


Fig. 62

Two Beechcraft AT-7 received in 1942 were given s/n 1 and 2.

Santiago A. Flores (SAFCH #588), USA.

The Spanish Boeing: The untold story

Part 1

Alfredo Logoluso

Salamanca: War Bulletin from Headquarters of National Army, 30 October 1936: "Three Potez aircraft of French provenance were shot-down this morning on the Madrid front; one falling within our lines near Navalcarnero, another burning in the air, and the third falling within enemy lines near Getafe. Also a 'Boeing' fighter aircraft was shot-down over Torrelaguna."

There are thousands of stories, airmen, and aircraft, many unknown and unreported, that make up the fascinating "aerial" history of the Spanish Civil War. Sometimes the attention of researchers focus on a single element, rather than on a general view of historical problems and influences derived from such a local conflict, soon obscured by the following gigantic Second World War. One particular research line looks at the forgotten stories of aircraft and airmen lost in the fire and smoke of the Spanish Civil War, a conflict that provides many surprises to "first hand" historical investigators as while as fake, invented, or incorrect information that circulates for decades.

Among several American subjects of this nature, it is known that at the beginning of the Spanish Civil War in July 1936, a single example of the Boeing single-seat monoplane fighter Model 281, export version of Model 266 or P-26A "pursuit" plane built at Seattle, Washington, was present on Spanish soil. (Note 1) It had arrived there one year earlier for evaluation by the technical staff of the Spanish "Dirección General de Aeronáutica" (General Air Directorate), as a possible replacement for the Nieuport-Hispano Ni-H 52 sesquiplane. The Ni-H 52 had been in service about five years and was obsolescent in both performance and design.

The Boeing arrives in Spain

Boeing Model 281, c/n 1962, was brought to Spain in 1935 by the recently appointed Boeing agent in Spain, Alfonso Albínez. It arrived by sea in March accompanied by Boeing's sales manager, Eric Nelson. It was officially presented the following April at Barajas National airport near Madrid, where it was flown by Boeing's chief test-pilot, Leslie R. "Cowboy" Tower. Tower flew the aircraft several times before high-ranking officers of the Spanish Air Force and members of the General Air Directorate. Also present was the Prime Minister of the Republic, Alejandro Lerroux García, who was involved in the government crisis as well as a public corruption scandal. Later, Nelson and Tower left Madrid for Seattle where, on the following 28 July, Tower carried out the first flight of new Boeing Model 299, prototype of the B-17 "Flying

Fortress" four-engine bomber. The Boeing 281 remained in Spain.

The Model 281 was an excellent aircraft as reported by the two Spanish evaluators who had flown it at Madrid: Alférez Fernando Pérez Acedo and Brigada Gonzalo García Sanjuán, both experienced fighter pilots and flying instructors. At that, they were serving at Getafe military airbase, the site of the Spanish "Aviación Militar" (Army Air Force) and the command post of the "Primera Escuadra Aérea" (1st Air Division).

Besides its excellent technical and flying qualities, the Spanish airmen were impressed by the Boeing's sturdiness and safety. They particularly commented on the headrest structure that protected the pilot in the event of accidentally overturning: a major problem for all low-wing monoplanes of that time. (One pilot had been killed in a landing accident aboard an early production P-26 that still had a low profile headrest.)

The export version Model 281

The aircraft Boeing sent to Spain was the fourth example of an export version, Model 281, and the second company "demonstrator" (after c/n 1959). As a result of flight tests in the summer of 1934, it had been equipped with split-type wing flaps to reduce the landing speed that was thought to be excessive for semi-prepared landing strips.

The Model 281 was powered by a Pratt & Whitney R-1340-33 nine-cylinder radial air-cooled engine, rated at 600 hp at 7,500 feet (2286 m). The loaded weight with a normal fuel load was 3,039 lb (1378 kg) resulting in a power-to-weight ratio of 0.197 hp/lb. The maximum speed was 235 mph (378 km/h) at 6,000 ft and the initial rate of climb was 2,210 fpm. Standard armament consisted of two 0.30-inch (7.62 mm) Browning machineguns mounted in the forward fuselage and synchronized to fire through the plane of the two-blade propeller. Because of the installation of the more powerful engine, the weight of the Model 281 was greater than that of the Models 248 (P-26) and 266 (P-26A), so some pay-load compensation was foreseen on the export version, for instance excluding radio equipment.

Spain selects the Hawker Fury

In spite of the favorable reports on the Boeing fighter, the Spanish Air Directorate preferred its cheaper competitor - the British-designed Hawker "Fury" biplane. The "Fury" was to be produced in Spain under license and powered by Hispano-Suiza 12Xbr twelve-cylinder liquid-cooled 612 hp engine, also to be made in Spain. The Hawker-Hispano "Fury" biplane had a power-to-weight ratio of about 0.177 hp/lb. A maximum speed of 210 mph (338 km/h), some 11 per cent lower than that of Boeing monoplane. However, the "Fury" biplane had a wing load of only 13.7 lb/sq.ft compared to 20.3 lb/sq.ft for Boeing monoplane, or 32 per cent lower, giving the British fighter a clearly better maneuverability. Standard armament of both competitors was practically equivalent, consisting in a couple of light synchronized machineguns.

The major handicap for the Boeing fighter was its unit-price, initially reported as 500,000 pesetas of 1935, equivalent to \$96,525. This was more than two-times the amount paid by Republican Spain two years later for the more advanced Soviet I-16 monoplane fighter, sold at \$40,000 apiece. In addition to the high cost of the improved version of P&W "Wasp" engine, the high price for the American aircraft was due to agency commissions and export-import taxes (likely including bribery by political and administrative officials). The same airplane, without power-unit and military equipment, was provided to the US Army for \$14,000.

In the summer of 1935, a contract was signed between Spanish Republican Government and British Hawker Aircraft Ltd. for the production at the Guadalajara plant of 50 Hispano "Furies". One year later, Boeing's Model 281 c/n 1962 was still in Spain since Boeing still hoped to eventually sell at least this one machine. (Note 2)

Additional Spanish fighter pilots had enjoyed the flying qualities of the Boeing monoplane: These included: Teniente Ramón Puparelli Francia, a test-pilot from Servicio Técnico (Technical Service) of Central Air Region at Cuatro Vientos air-base, and Teniente Ramiro Pascual Sanz, a patrol leader from Grupo No. 11 de Caza (11th Fighter Group) based at Madrid-Getafe. (Note 3)

The Spanish Civil War begins

When the military revolt headed by General Franco began on 16 July 1936 in Canary Islands, on 17 July in Spanish Morocco, and on 18 July in continental Spain, the Boeing monoplane was legally still the property of the American company. In the week between 18th and 24th July, the revolt, while successful in Africa and in some areas of southern and northern Spain, failed in Madrid, Barcelona, Valencia, and at all the important airbases around the Spanish capital city, and along Mediterranean coast from Murcia and main naval base of Cartagena up to the Catalanian border with France. The Spanish Republican Government, therefore, managed to maintain

control over about 80 percent of military aircraft then available in Spain within "Aviación Militar" and "Aeronáutica Naval" (Navy Air Force). At the same time, they also commandeered most of civil and commercial airplanes existing in the country.

Boeing fighter was confiscated and put into service. During the first weeks of the civil war, it was widely flown to the airbases of Madrid-Barajas, Getafe, Cuatro Vientos, Guadalajara, Cartagena Los Alcázares, and San Javier in Murcia. It was also flown on a propaganda air tour intended to show, incorrectly, that the USA was preparing to deliver modern equipment to the democratically-elected Spanish government.

A Peashooter without peas

According to Comandante Ismael Warleta Quintana, senior military pilot and "Jefe de la Sección de Armamento de Aviación Militar" (Chief of Army Air Force Armament Section) in Madrid, who had remained loyal to the Spanish Republic, the Boeing fighter had arrived in Spain with an armament of two machineguns. However, Republican pilot Andrés García Calle, better known as Lacalle, who in July 1936, was a Sergeant serving in Grupo No. 11 at Getafe, remembered that the American monoplane was initially unarmed. These two observations can be reconciled if it is remembered that the first demonstration of the Model 281, in April 1935, was at Barajas National Airport. This was a civil aerodrome where live-fire exercises were surely not allowed. It is possible that weapons were removed from the Boeing fighter upon its arrival in Spain. Moreover, there was an advantage for the American company to demonstrate a lightened aircraft with improved maneuverability and performance.

During its April 1935 presentation in Spain, the Boeing monoplane had a quite anonymous appearance: a dark (matt greenish "Olive-Drab") fuselage and landing gear fairings (the standard military camouflage on contemporary P-26s in the USA), but with no marks or code numbers applied. The wings and rigging were semi-gloss aluminum or painted silver. Between the end July and beginning August 1936, the rebels continued using the Republican insignia (red/yellow/purple roundels and rudder stripes) with black bands around the fuselage and wings as distinctive markings on their planes. Later, large red bands were painted around wings and fuselage of the Boeing monoplane, - markings widely adopted on Republican aircraft.

The first operational sorties of the Boeing Model 281 were flown between the end of July and the beginning of August 1936. These were flown by Spanish pilots from 1st Air Region who had remained loyal to the Republic. These flights were for reconnaissance of the front nearest to Madrid along the Sierra de Guadarrama north-west of the

capital. The Boeing was still unarmed, but it was fast enough to avoid attacks by rebel planes it might meet in this area, few of which were armed.

According to Lacalle, initially the unarmed Boeing monoplane also flew some sorties as "moral support" for Loyalist troops, giving them the illusion of increased air cover. Often the Model 281 was flown by Teniente Puparelli, who had previously tested it. He was an esteemed senior officer who was born in Saucelle in the province of Salamanca to a father of Italian origin. He soon became second-in-command of the Republican fighter force at Madrid-Getafe, under Capitán Manuel Cascón Briega, the commander of Grupo No. 11 de Caza. Between the middle August and the beginning September, Teniente Puparelli was assigned command of a fighter unit detached from Getafe to Extremadura, operating a Ni-H 52 on the Mérida front, unsuccessfully facing first He 51 and CR.32 fighters.

The Boeing becomes a fighter

In August 1936, about the same time the first imported French Dewoitine fighters were being armed at the Republic's Cuatro Vientos workshops, there appeared in Spanish skies new fighters on the Nationalist side - the German Heinkel He 51s and Italian FIAT CR.32s. The Republicans tried to remount the two original Browning machineguns with their synchronization system, but this proved unsuccessful because Spanish mechanics were unfamiliar with these American devices and eventually damaged them trying a hurried fitting. Moreover, there were problems about obtaining a regular supply of American ammunition.

Finally it was decided to transfer the aircraft to Los Alcázares workshops where, according to aeronautical engineer Julio Adaro Tarradillos, an aircraft designer and teacher at "Escuela Superior de Aerotécnica", the Boeing monoplane was equipped with two Vickers Mk II 7.69 mm machineguns. Their British-designed synchronization device was adapted to the American power plant. Both weapons and equipment were from a Ni-H 52 fighter.

Rearming the Model 281 was difficult and took some weeks, but finally the modified weapon installation proved itself effective and by the second half of September the Boeing monoplane was returned to the Madrid front and began to be operated as a fighter. It was initially flown from Getafe by Ramón Puparelli who had assumed the leadership of the local fighter units after Captain Cascón was assigned a new command and transferred to the northern Cantabrian front beginning in September. By then, Getafe-based fighters were heavily involved against German and Italian aircraft that were supporting Nationalist and African troops advancing towards Madrid.

The He 51 and CR.32 in combat

Between 16 and 25 September 1936, during the advance of Nationalist troops south-west of Madrid from Talavera de la Reina towards Toledo with the aim to relieve the siege of the Alcázar fortress, there was no encounter of the Boeing monoplane with Italian or German fighters. Twelve Italian and three Spanish CR.32 pilots of the "Aviación de el Tercio" were involved into ten aerial combats on days 16, 18, 20, 22, and 25, claiming to have shot down 5 Breguet single-engine and 4 Potez twin-engine bombers, and 5 Dewoitine, 3 Loire, one "Fury" fighter, and a light tourism aircraft (a Miles M2 painted red used as a reconnaissance plane). They also reported getting involved with a patrol of 3 Nationalist Ni-H 52s on the 25th without results. (These were probably flown by three of the first Soviet fighter pilots active in Spain: Ivan Kopets, Evgenij Erlihik, and Anton Kovalevskij.)

During the same period, three German He 51 were involved in two air combats, both on September 17, when they faced two Potez twin-engine bombers escorted by one Dewoitine and a "Fury" fighter. They claimed one Nieuport fighter probably destroyed and later confirmed. No reports by Nationalist fighter pilots during this period made any reference to any aircraft looking like the Boeing monoplane.

Air-combat on Toledo front continued on 26 September when CR.32s, operating from Talavera, carried out three patrols protecting the advancing troops; ten fighters flying for 24 hours and 30 minutes in total. During the first sortie, the Nationalist patrol leader and ace-to-be, Teniente Salvador, along with two Italian wingmen, noticed in the distance five Breguets retiring towards Republican lines but were unable to attack them. The second patrol led by Nationalist ace-to-be, Capitán Salas with two Italian wingmen didn't encounter any enemy aircraft. During the third patrol, while protecting Nationalist infantrymen from the VI Bandera of the "Tercio Extranjero" occupying Bargas, four CR.32s led by Nationalist ace Capitán García Morato, with Italian ace-to-be Sottotenente Mantelli, Sottotenente Cenni, and Sergente Presel, engaged a Republican formation composed by one twin-engine Potez and five Breguets escorted by two Dewoitine and two Loire fighters. García Morato initially escaped the attack of a Loire and then fired at the Potez and all five Breguets, claiming one of the latter as shot-down. Cenni claimed another Breguet shot-down, and along with Mantelli, repeatedly fired at the Potez bomber which was seen to give out a long trail of smoke and then to crash beyond Republican lines. Meanwhile, Presel fought skillfully alone against the two Dewoitines being able to shoot down one, which caught fire. He then attacked the other Dewoitine, claiming it as

probably destroyed.

The Spanish Boeing Scores a Victory

While these patrols were in progress, no further Nationalist fighters were operating on the Toledo front. Some CR.32s, damaged in air-combat the previous days, were being repaired, while six He 51s of the "Staffel Eberhardt" with their German pilots had been temporarily transferred to Vitoria on the Bilbao front in the Villareal de Alava sector. This left only two He 51s at Cáceres for local air defense. So, no fighters were available by the morning of 26 September to escort three Nationalist "Escuadra B" Ju 52/3m bombers of 2a Escuadrilla Junkers, sent from its new airbase at Naval Moral de la Mata to attack Republican positions and artillery emplacements near Bargas, 5 miles north of Toledo.

Fighter pilot and ace-to-be Alférez José Larios Fernández, who was then serving as a machine-gunner aboard one of the three-engine Junkers, later recalled: "We took-off at 0915 hours; our target was the enemy lines near Toledo. As usually, we had no fighter escort. We arrived on the target and unloaded our bombs and when we turned back home with our three aircraft flying in close 'V' formation, we were caught by "Red" fighters that appeared from the blue of the sky. I didn't notice anything until I heard the metallic crackling of machineguns melding with the deep roaring of our engines. Immediately, our formation dived at full power towards the far-off friendly lines. From my lower gun position inside the aircraft I could see nothing of what was happening above us. I could only wait for events while remaining on the alert with my machinegun ready. The heavy bomber chattered in all its joints owing to the violence of the dive. I felt a strong nervous tension, waiting to watch the enemy, when I saw with horror that the aircraft flying on my right emitted fire and black smoke. It had broken formation and was diving almost vertically towards the ground. Seconds later, two parachutes, white as snow against the blue sky, opened in the quiet and clear air. The aircraft, burning as a torch, continued its dizzy fall until it impacted the ground producing a tremendous explosion". (Note 4)

This three-engine Ju 52, number 64, was the first Nationalist heavy bomber to be shot-down by Republican forces during Spanish Civil War. The victory is most likely ascribed to Ramón Puparelli flying the Boeing Model 281 monoplane. Indeed, according to Coronel José Gomá Orduña, who was a bomber pilot during the Civil War and author of first historical book about air operations in Spain ("La guerra en el aire", Editorial AHR, Barcelona, 1958): "On the 26th... land forces are at the gates of Toledo. Junkers groups are flying in the air. Red fighters arrive in a desperate attack, and one Rata shot down the aircraft flown by Eustaquio Ruiz de Alda...". "Rata" (or "she-rat") was the nickname by which Nationalists later identified the

Soviet I-16 monoplane fighter, initially also called "Boeing" due to its resemblance with American P-26 monoplane fighter. However, the first I-16s were not unloaded in Spain until 3 November and appeared in action not before 10 November 1936. Therefore, no Soviet monoplane fighter could have been on the Toledo front on 26 September, and the reference by Gomá to a "Rata" seen that day, could only be interpreted as a miss-identification of another monoplane fighter; the unique Boeing Model 281 then serving with the Republican Air Force.

An indication of the man who most likely obtained that air victory can be deduced from another source – a British pilot engaged to fly for the Spanish Republic, who was in Spain since the beginning November 1936. This mercenary airman, Hugh Oloff de Wet, was the author of a book written in 1938 on his presumed war experiences. He used his real name, but without any reference to the real identities of the persons involved, changing names, dates, and locations. However, the narration appears to be partially inspired by real events. Oloff de Wet wrote of the Junkers bomber shot down near Toledo one morning near the end of September 1936. He correctly said the crew had been killed, but gave the incorrect date of the 29th. He stated that it was an individual victory obtained by a pilot named "Locattelli" operating from Getafe aerodrome. Reference to the Italian name (and the same four-letter ending as Puparelli) likely indicates that the successful airman was the same one who flew the Boeing monoplane fighter operating from and around Madrid at that time.

During and after the Spanish Civil War, Puparelli understandably gave no publicity to this air-victory, considering the known and brutal end suffered by the Nationalist airmen.

García Lacalle also remembered that a Junkers bomber was shot down by his comrade Sargento Rafael Peña Dugo, who was a Cabo piloto within Grupo No. 11 at Getafe. Evidently Peña took part in the attack on the three Ju 52s of 2a Escuadrilla, claiming a bomber shot down. Three Dewoitine fighters took part in that air combat (as reported by Elstob) accompanying the Boeing monoplane which, being flown by senior officer Puparelli, recently promoted to the rank of Captain, was likely the patrol leader's aircraft. As indeed reported by Republican War Bulletin of September 26th, issued at 3 p.m. hours: "Central front... At nine this morning, a patrol with numerous Republican aircraft attacked three rebel air units, shooting down two great and modern bombers of foreign production...." Only one three-engine Junkers was actually lost, so it is possible that Peña fired at the same Ju 52. The combined attack by four light machineguns by two fighters had a better chance of destroying a heavy three-engine bomber than the two weapons of a lone Boeing.

Later that same day, Peña took part in the next sortie near Bargas, again flying a Dewoitine D.37 "parasol" monoplane fighter from Getafe. He became involved in air combat with the last CR.32 patrol of the day, led by García Morato. In the following fight, Peña's Dewoitine was shot down by Presel (his third confirmed air-victory); the Republican pilot being seriously wounded in a leg by a 7.7 mm bullet from Presel's Breda SAFAT machinegun. However, Peña was able to bail out by parachute from his burning aircraft. Aided by Republican soldiers and attended at one of Toledo's hospitals, Peña escaped the

following day just before the town was occupied by Nationalist troops. Unfortunately, the stress and lack of care at the critical moment of his recovery caused gangrene in the wounded leg, which eventually had to be amputated. (Note 5)

Alfredo Logoluso, Italy.

(To be continued)

Notes

1. The Boeing Model 248, prototype of the Boeing P-26 "Peashooter", flew for the first time on 20 March 1932, only six months after the start of the design. The P-26 became the first all-metal fighter accepted for serial production in the USA, the first American production monoplane fighter, and the last pursuit plane accepted by the US Army with an open cockpit, externally-braced wings, and a fixed undercarriage. It was also the last production fighter for the Boeing Company, who by then were mainly dedicated to the design and development of multi-engine bombers and transport aircraft.

2. By this time, it was the last unsold Model 281 out of an export-series of twelve fighters produced (c/n 1959 to 1962 and 1965 to 1972). The other eleven aircraft had been exported to China for Chiang Kai-shek's Nationalist Air Force. The Export Boeing first appeared China in September 1934, but it was soon lost in an accident during its demonstration. The remaining batch of ten machines following in January 1936 having been delayed by funding difficulties until the required sum had been collected by Chinese community in the USA.

3. Pascual Sanz, joined the Nationalist rebels at León while on leave when the uprising began. The other first evaluators of the Boeing, Pérez Acedo and García Sanjuán, continued to serve with the Republican Air Force.

4. First pilot and commander of shot-down three-engine Junkers number 64, Capitán Eustaquio Ruiz de Alda, and co-pilot Sargento Quintín Segovia Martínez, were killed inside the cockpit of the bomber. According to General Jesús Salas Larrazábal, the other four crew members jumped by parachutes from the falling aircraft – but only two (the last to jump out) were seen and reported by Larios. They were the engineer Sargento mecánico César Ledesma Ramos, the radio operator Sargento Joaquín Sanjuán Gongora, the observer and bomber-aimer Alferez provisional Jenaro Lucas Martínez and the machine-gunner Cabo Antonio Nieto González. Only one had saved his life, the other three being reported as violently killed in different circumstances. Ledesma was likely wounded by the pilot of a Dewoitine fighter who

fired at him while he was dangling from his parachute (as could be also deduced from information later collected by British writer and aspirant-pilot Peter Elstob, who reached Republican Spain in October 1936 as a volunteer). Captured on the ground by furious militiamen, the unfortunate engineer was finished perhaps after his identification revealed he was the brother of well-known Ramiro Ledesma, founder of the JONS Nationalist party. Lucas landed safely and defended himself by firing his pistol against approaching militiamen (and shooting three of them according to Elstob) before being overwhelmed and killed by the mob - his body suffering horrible mutilations. As remembered later by Larios: Nieto suffered a similar death. He was brought to Toledo and dragged along the streets by his parachute harness. They cut off his ears and his tongue and put into his bloody mouth the crucifix he carried around his neck. Then they shot him. These tremendous events were related to the authorities by actual witnesses, after liberation of the Alcázar». Sanjuán was also captured by militiamen and tortured by some women accompanying the mob (who, according to Elstob, procured deep cuts on his body by razors): his life was saved by some Republican soldiers and later he would return to Nationalist Spain in an exchange of prisoners.

5. On 27 September, Nationalists troops found on the outskirts of Toledo the bodies of their air force comrades, Lucas and Nieto, savagely killed by the mob the day before; one put into the luggage compartment of an abandoned car and the other left on the edge of a suburban street. Ledesma's body, the third airman killed after his jump by parachute from the falling Ju 52, was found later, possibly scalped, as reported by the British correspondent of the "Daily Mail", H.G. Cardozo, who had been following Nationalist advance. The Nationalist officials commanding Spanish, Legion, and Moroccan troops who participated in the final assaults on Toledo, decided to take no prisoners as an act of retaliation. This was reported in the memoirs of Irish volunteer Noel Fitzpatrick who was an officer with the "Tercio Extranjero".

The Avia-Fokker F.IX in Czechoslovakia

[Editor: This article first appeared in the French magazine, *AirMagazine*, and is printed here with the permission of their editor, Jose Fernandez. The translation is by Sandy Schachter with technical assistance by Frits Gerdessen.]

At the beginning of the 1930's, the Air Department of the Ministry of Defense (LO MNO, Letecký Odbor Ministerstva Národní Obrany) concluded that the Aero and Letov factories would be unable to meet the deadlines for delivery of the multi-engine bombers Aero A-36 and Letov S-29 that they had ordered. The reason given was the lack of experience in Czechoslovakia in the production of large airplanes. The local engineers had not yet mastered the design of multi-engine planes, and the construction of metal airframes was at a standstill in Czechoslovakia. In addition, there were no engines locally available that could equip an airplane of this class. The only aircraft constructed in the country, the twin-engine Aero A-34, did not meet the specifications of the ministry. The twin-engine biplane, Farman Goliath built under license, was obsolete and was no longer relevant to the needs of the army. The French twin-engine biplane, Liore & Olivier LeO-7, acquired to serve as a model for the Czech industry, had crashed shortly after its delivery.

This series of problems had already gone on for two years, and the ministry had finally decided in favor of a proven foreign model.

Tests of the F.VIIb/3m

As holders of a license from the Dutch Fokker-Holland firm, the Aero company was producing the F.VIIb/3m, a well-known trimotor, high-wing transport. The ministry ordered (memorandum c.j. 50.336/V-3-1929.) a trial airplane equipped with external bomb racks, machinegun posts, and night flight capability. It was to become the military F.VII.b.1, meaning bomber, the first of its type.

The first flight of the prototype took place on June 15, 1931, but according to the military commission the trials that followed were not satisfactory in regard to performance (speed and altitude too low, climb rate too slow, and bomb load too small). The prototype was assigned by the air force as a training plane.

A new Fokker license

Meanwhile, in Holland on August 23, 1929, Fokker test pilot Emil Meinecke made the first flight of the new Fokker F.IX. This high-wing, trimotor transport followed the pattern of the older F.VIIb/3m. The plane, fuselage number 5106, was bought by the national airline KLM which registered it as PH-AGA and used it until 1936 before sending it to Alain Pillain and the SFTA (Société Française de Transport Aériens), which reregistered it as F-AFPA. It was then sold to the Spanish Republicans, and after the Civil War it served with the new Spanish government. Fokker produced the second and last F.IX (fuselage number 5241, PH-AFK), which was also used by KLM until it crashed at Waalhaven on August 4, 1931.

Because of its license with Fokker, Avia heard about the new airplane and informed the LO MNO of its existence at the beginning of 1930. The ministry then invited Avia to negotiate a contract with Fokker, and in August 1930 the LO MNO ordered (memorandum c. j. 44.338/V-3 1930) twelve F.IX for service in the air force as bombers. Once the licensing rights were obtained, the engineer-in-chief of Avia, Frantisek Novotny, proceeded to adapt it to military use.

Development of the armament

During the development of the military version of the F.IX, great care was taken in designing the defensive armament that had to cover the whole space surrounding the aircraft. The original plan of 1930 envisioned three gun positions: The first was located behind the cockpit on the leading edge of the wing with twin 7.92 mm machineguns. The second position, with either a 7.92 mm machine gun or a 20 mm cannon, located on top the fuselage just behind the wing. A retractable Skoda turret with twin machineguns was to be mounted under the fuselage. On both sides of the fuselage, a machinegun was to be mounted in a window behind the engine nacelles.

This proposed armament was tested on a wooden model in a wind tunnel. The resulting tests showed that the forward gun position disturbed the air flow over the fuselage, reducing the stability of the airplane and the effecting the efficiency of the rudder at the lower speeds.

Therefore, in 1931 the armament was reduced to a 7.92 mm machinegun fixed in the nose firing through the propeller, twin machineguns in the dorsal position behind the wing, and another pair in a ventral position. (See Editor's Note) The fuselage bomb bay could hold between 800 and 1500 kilos of bombs.

Technical requirements

The following requirements were part of the ministry's offer (c. j. 15.521/III² of August 30, 1930) to the Avia. Company to supply nine Avia Fokker F.IX heavy bombers. The order that followed on December 15 specified:

The tail will be made of steel tubes. The elevator will be adjustable in flight. The propellers will be wooden with metal leading edges. The piping system will be painted thus: red for the fuel system, black for the lubrication system, yellow for the fire extinguisher, and white for the pneumatic circuit.

There will be four fuel tanks placed in the wings: two of 750 liters and two of 360 liters. The Aero fuel pumps will be furnished by the armed forces.

The wooden wings will be built around two box spars and mounted directly on the fuselage with four metal fittings. The wing will be covered entirely by plywood and will include a reasonable number of access hatches to reach the aileron cables.

The fuselage will be constructed of welded and bolted steel tubes, with certain parts strengthened by tubes and others by wire. The rigidity of the bottom section will depend essentially on the wooden floor, whose parts will be bolted to the fuselage. The central motor will be fixed to the fuselage, and the cowling will be made of sheet metal. The bomb bay will include two compartments for twelve bombs of 50 or 100 kg positioned horizontally. An external bomb rack will be placed under the axis of the plane for a projectile of 200 to 500 kg, plus two other similar devices for bombs of 100-200 kilos, under the fuselage. A seat will be placed behind the bomb bay for the radio and photograph operator, and a machinegun post will be provided in the upper section behind the wing and be used for a large-caliber Semag machinegun. A fixed Vickers machinegun will be placed in front of the pilot, and twin Lewis guns will be installed in the ventral position behind the bomb bay.

The undercarriage will consist of braked wheels of 1500x300 mm and one tail wheel replacing the original tail-skid. The suspension will be rubber cords and metal tubes providing shock absorption.

Each leg will be streamlined and connected to the engine nacelles. The rubber cords will have to be replaceable. The wheel base will be 7 m.

There will be three Walter-Jupiter VI engines, each with a maximum 450 hp at 1750 rpm; the cruising power being 334 hp at 1580 rpm. Each engine will have its own oil tank with a capacity of 80 liters each, with 8 liters of expansion space. The central fuel tank will be located just behind the fuselage engine, and the lateral tanks will to be included in the wing. The specific consumption will be 3x105 kg/h at maximum power, and 3x80 kg/h at cruising speed.

The crew will consist of four members. The maximum speed at ground level will be 205 km/h with a cruising speed of 173 km/h and a minimum speed of 108 km/h.

The tyres, produced by Palmer Tyre Ltd. in England, are 1595x400 mm, and inflated at 4.2 bars, and can support 5.9 tons. (An example of a tyre from F.IX.10, can be seen at the Prague National Museum of Technology.)

The First Avia F.IX

The first Fokker bomber, manufactured under the designation F.IX, was assembled at the Avia factory at the beginning of February 1932. The flight-test crew, made up of the first pilot Cerny with Major Kozeluh as copilot and engineer Vencel, made the first flight of the plane from Kacovice, the airport at Prague-Kbely, on February 17, 1932. Two days later, Cerny and Venci made several more test flights. On March 31, they flew the plane back to Kacovice for minor repairs. This was followed by a return to Kbely, where an army commission awaited a demonstration. The delivery ceremony began on April 26. In the course of the first acceptance flight, Cerny and Kozeluh discovered a break in the pipes feeding an oil pump. In addition, the streamline wheel covering rubbed the tires on take-off and landing. These problems were corrected the same day before continuing the trials. The third day saw a test of the behavior of the plane on two motors, after which the plane was delivered to the air force.

The actual performance of the plane was then compared to those stipulated in the official orders. These required four fuel tanks with a total capacity of 2220 liters, while the test plane was equipped with only two tanks of 750 liters. This discrepancy resulted in serious reproaches to the manufacturer,

and the specified tanks were installed in the F.IX between May 10 and 13.

From the 23rd to the 27th, test flights would be continued with various loads. The following problems surfaced during these flights:

1. Bomb doors not satisfactory.. One of the two was torn away in flight.
2. Window frame not sealed. Water in the cabin
3. Bad placement of the compass. It vibrated too much in flight.
4. Insufficient view from the bombardier's post. Need larger windows.
5. Insufficient suspension of the landing gear. Need for more powerful shock absorbers.

After all the faults were corrected by the builder, the prototype was then sent to the VTLU (Vojensky Technicky Zkusebni Ustav) at Prague-Letnany, where it was presented on August 18, 1932, to representatives of Parliament.

One of the Walter Jupiter engines quit during a flight by Cerny and Vencl. A series of minor faults would also be recorded in the course of the test flights at VTLU, and the suggestions for corrections accepted by the factory.

The planes in the series

In addition to the assembly of the prototype, two Avia F.IX bombers destined for Yugoslavia (and called F-39 by Avia) as well as 11 F.IX for the Czechoslovakian air force were being built at the factory. Production ended in June 1934.

The Jupiter VI engines installed on some of the F.IX were recorded in reports of Dec 1933: Engines number 203, 204, and 205 on the F.IX.10. Engines number 206, 207, and 199 on the F.IX.11. Engines number 94, 70, and 26 on the F.IX.12.

The total price of an F.IX of this series amounted to 1,783,800 crowns, divided as follows: 985,000 for the airframe, 615,000 for the engines, 58,800 for the wheels and their controls, 25,000 for the electrical systems, and 100,000 for the armament.

The doctrine for Czech heavy bombers

"Tactique Aerieenne", published in 1930 by the Ministry of Defense, states in Chapter 3, "Les unites de bombardement lourd", that three to six heavy bombers should constitute the basic tactical unit. A larger formation would make logistics, e.g. replenishing fuel and bombs, too difficult. In addition, a larger number of big aircraft would make an airfield unable to serve other units.

Each unit could act independently. Two units would form a squadron (letka in Czech). This scheme was the most efficient for training in times of peace and assures competent and concentrated use for an attack on a given target in the eventuality of conflict.

These considerations applied to the F.IX, where four bombers constituted a squadron. A conventional squadron in the Czech air force normally included 12 single-engine planes. Therefore, four 3-engine F.IX with a total of 12 engines fitted into the logistic scheme for fuel and spare parts.

The 12 F.IX on order thus constituted three squadrons of four heavy bombers each. They were assigned to the 5th Air Regiment (5th Letecký Pluk in Czech) at Prague-Kbely, later to be located at Brno. These units were identified as follows: an "L" for the 81st Squadron, an "N" for the 82nd, and a "P" for the 83rd. After 1935, new Aero MB 200 (Marcel Bloch MB 200 built under license) began to enter service with the heavy bomber units, and some F.IX were reassigned to the 84th Squadron (letter "R").

The serial number of each plane was identical to its factory number. Thus F.IX.6 was identified as "N6" (plane number 6 of the 82nd Squadron).

Accidents, damages, and the unexpected

Several accidents, some of them tragic, occurred during the career of the F.IX, the most important being:

-The first forced landing took place on November 9, 1933. During a flight from Olomouc to Prague, F.IX.2 "N2" had to land near Benesov. Major Mares, Sergeant (cetar) Vnuk (later a test pilot for Aero), and Lieutenant. (nadporucik) Frank escaped the nocturnal landing without injury.

-A curious event took place on May 17, 1934. According to the Police Department of Prague, a Mrs. Jozefa Mozna, resident at 23 rue Liblicka, Prague-Hloubetin, brought to the 16th Police Station an object of one kilo that she claimed had fallen from a plane flying over her house between 10 and 11 that morning. This object penetrated her roof, breaking three tiles, before landing in her attic. The lady demanded financial compensation for the damage. The police conducted an investigation and discovered that the object had fallen from F.IX.10 "N10" assigned to the 82nd Squadron. Piloted by Capt. (kapitan) Hosek, Adjutant (rotmistr) Cais, and Sergeant (cetar) Varis, the plane had taken off from Kbely airfield around 1010 hr in the morning on its way to Brno. A gust of wind had probably detached

the object since Sergeant. Hrebacka had done a careful pre-flight inspection. The victim received the expected compensation and no complaint was registered against the members of the regiment.

-F.IX.8 "N8" crashed on landing on the Avia airfield at Cakavice on July 26, 1934. The crew of Adjutant (rotny) Vala and adjutant engineer (rotmistr) Gerstberger had just taken off from Kbely on a routine flight. As the plane left the tarmac, it was pushed to the ground by a gust of wind, and the left wheel hit a boundary sign. The left landing gear broke and the plane landed hard on its right wheel. After traveling 70 m., the left leg broke off completely resulting in seriously damaged the tail of the plane. As a consequence, the landing ended in a ground loop damaging the left wing. The right motor also hit the ground leaving the propeller in pieces, and the cowling battered. The crew escaped uninjured, and the plane was to return to active service after repairs.

-Another curious event occurred on June 15, 1935, on Brno airfield. Capt. Jan Stepan was approaching the airstrip with a single-engine Avia BH-11B registered OK-LES that belonged to the Aero Club of Bratislava. During final approach, the engine cut and the plane went into a spin and struck the roof of a hangar at 14.26 hr. F.IX.5 "P5" was in the hangar and was showered by glass and concrete damaging its wing. Stepan suffered only light wounds to the face, and the bomber would be repaired at Olomouc. The damage was covered by an insurance company.

-On January 12, 1937, F.IX.8 "R8" took off from a military airfield near Malacky, in Slovakia, in order to return to its base after a winter bombing exercise at the Malacky firing range. Just after the takeoff, the central engine stopped, and when the pilot, Sergeant Prchal, tried to stabilize the plane, it overstressed the other two engines and the plane crashed. The commander, Lieutenant Vesely, and the machine gunners, Adjutant Kosek and Corporal (svobodnik) Trnka, were all wounded in the accident, and Caporal Kamwnik (gunner) and the armorers, Sergeants Joba and Adjutant Bouse, were unhurt. No one knows what happened to the plane after that.

-The first tragic accident occurred on February 4, 1937, at 1745 hr. During a training flight, F.IX.1 "L1" was engulfed in dense low clouds and the pilot lost control of the plane, which crashed about 2 km from the Brno airfield. Capt. Safarik, Adjutant

Ovcarik (pilot), and Sergeant Plechaty (co-pilot), died in the accident, and the gunner, Corporal Hellesic was seriously injured. The other gunner, Sergeant Macku, escaped uninjured. The plane was completely destroyed and stricken from the inventory.

-The second tragedy took place on November 22, 1938, in the High Tatras, in Slovakia. F.IX.3 then used for training encountered a severe storm in crossing the mountains.. It hit the main peak and crashed at 1900 m altitude, near the place called Lomnicka Proba.. Capt. Loeffler lost his life, Corp. Doubek was seriously injured, and Sergeants Zabrz and Vana were unhurt. The plane was reduced to pieces, and the remains of the wreck can still be seen.

Air Fairs and other events

The F.IX came to be an indispensable element in every air fair, demonstrating its ability to attack hard targets, especially aerodromes. It was always the same scenario: the "enemy" bombers attacked a target, Czech fighters (Avia B-534) intercepted them, and a "brutal" air battle took place. One of the bombers was then hit (thanks to the illusion of a smoke pot placed under the wing), and its crew (in fact, parachutists), abandoned the "burning" plane. Usually, the Minister of Defense and his group arrived at the fair aboard an F.IX (often "N8") after the military parade which opened the air show. These fairs were spectacular and very popular.

On the evening of March 7, 1937, an F.IX flew at a very low altitude over Brno, the capital of Moravia, to mark the 87th birthday of the premier of Czechoslovakia, Tomas Garrigue Masaryk. The plane carried under its wings large neon signs with the initials of the president: a "T" under the left wing, "G" under the fuselage and "M" under the right wing.

Another F.IX.9 was used as a transport for engineers and spare parts destined for the Czech aircraft appearing at the 4th International Meeting in Zurich in 1937. For the flight to Switzerland, the armament was removed, new seats were installed, and the fuselage was adapted for transport use. On July 17, 1937, the original military markings were painted over and the plane was registered OK-AMR. The new registration was painted in black on both surfaces of the wings and on the two sides of the fuselage. Except for those on the underside of the wing, the registration letters were bordered in white. The plane would, of course, be returned to its original state after it returned to its original unit.

End of service in the Czechoslovakia

At the time of the dismemberment of the First Republic in 1938, the F.IX was already obsolete. It had gradually been replaced as a bomber by the more modern Aero MB 200 and Avia B-71. The F.IXs still in service were being used for training for long distance navigation, bombing instruction, and testing of new bomb sights. Some were even converted to civil transport, such as the Avia F.IXD. After the occupation of the rest of Czechoslovakia in 1939, some F.IX's served with the Luftwaffe. At least one (a transport plane which would be used also for parachuting) was resold to Croatia.

Finally, in the archives of the Skoda firm mention is made of Romanian interest in the purchase of Skoda patrol boats, and the minutes from a meeting in the spring of 1941 state that a Romanian delegation had also come to take delivery of two F.IX bombers, but there was no more information. So is it possible

that two F.IX flew under Romanian colors during WWII?

Camouflage

The upper surfaces and the sides of the F.IX were painted in khaki green, and the lower surfaces were in aluminum paint. The individual aircraft identification markings were black (F.IX.1 to F.IX.12) on each side of the nose under the cockpit. On the starboard side of the fuselage was the unit insignia consisting of a Moravian eagle on a 450x500 mm white rectangle with a red border, representing the 5th Air Regiment. This was followed in white by a code corresponding to the squadron, plus a number, e.g. 'N10'. On the port side, this order was reversed, e.g. '10N'. The national roundels, bordered in blue, were above and below the wings, as well as on each side of the rudder. □

Editor's Note

The original article describes the final armament arrangement thus: “une mitrailleuse fixe de 7,92mm dans le nez, un fuselage derrière la voilure et un autre en position ventrale.” I find it unusual that a tri-motor heavy bomber would carry a “fixed machinegun in the nose”. Available photos, color profiles, and technical drawings show an open gun post in a dorsal position immediately behind the wing. However, these same

sources reveal a variety of ventral gun posts. The most common is the step in the lower fuselage that allowing a gunner to protect the area under the bomber's tail. Several photos and a color profile show a gondola-like structure under the nose directly below the pilot's cockpit. This is most likely a position for the bombardier – a solution adopted by many tri-motor bombers of the 1930s. However, this could also be a position for

a gunner to protect the front of the bomber. A third ventral gun post, shown on a color profile and in a detailed technical drawing, is a retractable turret similar to those on Ju 52 bombers. Perhaps one of our Czech members can help clarify the status of the various configurations.]

Captions for the Photos on pages 38, 57, 71-72

- 1.1. The wooden model of the F.IX prepared for tests in a wind tunnel. Note the upper turret and the streamlined wheel covers.
- 2.4. The first F.IX assembled on the airfield of the Cakovice factory before its first flight on February 17, 1932.
- 3.5. Manufacturer's photo of the prototype F.IX, taken for the Ministry of National Defense, with the upper and lower turrets retracted.
- 4.6. Front view of the prototype F.IX during tests of the upper turret. Photo was taken during the winter of 1931-32.
- 5.7. F.IX.1 in service with the 82nd Squadron of the 5th Air Regiment, in the summer of 1938.
- 6.8. An F.IX on a forward airfield near Malacky, Slovakia, during the bombing exercises in the summer of 1932. According to its markings, it belonged to the 81st Squadron of the 5th Air Regiment (R. Schneider Archives)
- 7.10. President T.G. Masaryk (fifth from the right) converses with his superior officers during his visit to Prague-Kbely. Beside him, from the left, General Syrový, Defense Minister Bradac, Chief Engineer of Avia Novotný, General Bily, Lieut-Col Vicherek, and Col Fajfr.
- 8.11. F.IX.1 “L1” at Brno airfield when it was attached to the 81st Squadron of the 5th Air Regiment.
- 9.14. Kbely airfield personnel in front of F.IX.2 “L2”, probably in 1932.
- 10.17. The sixth F.IX assembled with a retractable ventral turret during tests at Cakovice airfield in the spring of 1933. The plane carried only the emblem of the regiment during this period with no other marks.
- 11/12.26. F.IX.2 “N2” during bomb loading. The size of the wheels compared to the size of the men is of note.
- 13.30. A Yugoslav delegation led by Gen. Nedic inspects the planes on the airfield Prague-Kbely in the company of Col. Fajfr, Gen. Bily, and other superior officers on October 10, 1934. F.IX.8 “N8” and F.IX.12 “N12” represent the 82nd Squadron.
- 14.34. Returning from Switzerland to Prague, the planes made a stop at Pilsen airfield. In the first row; Avia B-534 OK-AMN (201), OK-AMO (202), OK-AMQ (204), and F.IX.9 OK-AMR. In the background can be seen the planes of the Eastern Bohemian Air Club of Pilsen (Zapadocesky Aeroklub Plzen), from left to right; Letov S-39 OK-19), S-239 OK-ELH (19), S-29 OK-ELF (11), and Avia Ba-122 OK-AMI (17), OK-AMH (16), and OK-AMM (22).
- 15.35. F.IX.10 “N10” parked on the Brno airfield. Notice the simple mud guards.
- 16.37. Two F.IX in the hangar at the VTLU. Note the streamlined wheel covers on F.IX.2 in the foreground. F.IX.12 “L12” is at the back of the hangar.



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Avia-Fokker F.IX.1: 81st Squadron, 5th Air Regiment



Avia-Fokker F.IX.9: 81st Squadron, 5th Air Regiment



Avia-Fokker F.IX.12: 82nd Squadron, 5th Air Regiment



Avia-Fokker F.IX.11; 83rd Squadron, 5th Air Regiment

Mosquitos Abroad

Tim Callaway

[Editor's note: This article first appeared in the magazine *Aviation Classics* and is reprinted here with the permission of the editor and author, Tom Callaway.]

During the Second World War, the Mosquito was issued to a number of foreign air force Squadrons serving with the RAF, as well as Canadian and Australian units in those countries. Post-war, the Mosquito's performance meant it was much sought-after for a surprising variety of overseas customers.

During the Second World War, Polish, Czech, Free French, Norwegian, Belgian and Dutch Squadrons were all formed as part of the RAF, manned by expatriate aircrew fighting to return to their homelands. Many Commonwealth Squadrons were also formed, with personnel from Australia, Canada, Kenya, Jamaica, New Zealand and South Africa, thousands of volunteer air and ground crew came to the UK, adding their strength to the RAF. In fact, there was an entire Group of Bomber Command made up of Canadian Squadrons. A number of these Squadrons operated the Mosquito, 305 and 307 Squadron were Polish, 333 and 334 were Norwegian. Six Squadrons were Canadian, two were Australian and three were made up of personnel from New Zealand. In addition to these, 60 Squadron of the South African Air Force was placed under RAF control during the war. Most of these saw operational service in the European and Mediterranean theatres. The USAAF also used the Mosquito night fighter and photo-reconnaissance with several units based in Europe.

Canada

There were also a number of other units from these air forces that operated the Mosquito. 13 Squadron of the Royal Canadian Air Force was equipped with Mosquito B Mk 25s among other types and operated as a photographic survey Squadron in Canada from 1944 to 1946.

Australia

1 Squadron of the Royal Australian Air Force (RAAF) re-equipped with Mosquito FB Mk 40s on 15 January 1945, and operated from Labuan Island against the Japanese until the war's end. Another RAAF Squadron, 87, operated photo-reconnaissance Mosquitos from 10 September 1944 at Coomalie Creek and flew sorties to the North of Australia. One of their longest

sorties photographed Japanese forces on Java, covering over 2,300 miles (3,700 km). A third RAAF Squadron, 94, had begun working up on Mosquitos when the war ended. All of these units were supplied with aircrew from the RAAF's 5 Operational Training Unit (OTU) who instructed aircrew on the Mosquito, initially T Mk IIIs supplied from the UK, but later on the locally built T Mk 43. 1 Squadron disbanded in August 1946 at Narromine, where many of its aircraft were disposed of to civilian buyers. 87 Squadron continued to provide the RAAF with its photo-reconnaissance capability on Mosquitos until December 1953.

New Zealand

Two Squadrons of the Royal New Zealand Air Force (RNZAF) were briefly equipped with Mosquitoes post war, 14 and 75. 14 Squadron had been based in Japan flying F4U Corsairs as part of the British Commonwealth Occupation Force. On their return to New Zealand in November 1948, the Squadron was re-equipped with Mosquitos, a combination of UK built FB Mk VIs and its Australian built equivalent, the FB Mk 40 along with a few T Mk 43 dual control trainers. It operated this mixed fleet until 1952. 75 Squadron was reformed at RNZAF Base Ohakea in October 1946, the Squadron title and badge being a gift from the grateful RAF, the only time this has happened. It was equipped with a similar mixed fleet to 14 Squadron, until these were replaced by de Havilland Vampires in 1951.

Norway

At the end of the war, 333 and 334 Squadrons returned to Norway, and took their Mosquito FB Mk VIs with them. Further aircraft were purchased from RAF stocks and the type remained in service with the Royal Norwegian Air Force until 1952.

Sweden

Another Scandinavian country, Sweden, also purchased Mosquitos from ex-RAF stocks. Beginning in 1948, 60 Mosquito NF Mk XIXs were delivered to the Swedish Air Force, or Flygvapnet, for service with the first, second and third Squadrons of the F1 Wing. In Swedish service, the type was designated as the J30. The three Squadrons had different coloured markings to identify their aircraft, the first having white spinners and large code letters painted on the fin, the second had the same markings in blue, and the third in yellow. The first

Squadron later changed to red markings in 1950, and the type remained in service until 1954. Interestingly, it was replaced as the Flygvapnet's night fighter by another de Havilland aircraft, the Venom.

Belgium

On 18 November 1946 the UK and Belgium signed an agreement to supply aircraft and equipment to the Belgian Air Force as part of a mutual defence pact. Three different versions of the Mosquito were initially supplied, the first being 24 Mosquito NF Mk 30s which served with 10 and 11 Squadrons of 1 Wing of the Belgian Air Force based at Beauvechain. Two additional NF Mk 30s were delivered in 1953, and the type remained in service until the last were struck off charge in October 1956. In order to train ground crew to service the NF Mk 30s, two other night fighters were purchased to serve as instructional airframes, an NF Mk XVII, HK327, and an NF Mk XIX, MM631. These two aircraft had already been given instructional airframe status by the RAF, and were delivered to the Technical School at Tongeren. Lastly, in order to train the aircrew, seven Mosquito T Mk IIIs were purchased as trainers, along with a single instructional airframe for the Technical School. The seven trainers were the first to be delivered, arriving at the Advanced Flying Training School at Brustem between July 1947 and February 1948. These aircraft were soon replaced in the training role by the Airspeed Oxford, so were modified to become target tugs, locally designated as TT Mk IIIs. They were allocated to the Fighter Training School's(JVS/EC) Flight 600 at Koksijde and replaced the Miles Martinet in the target towing role, where they served until November 1955. They proved so successful in the target towing role that three more aircraft, Mosquito FB Mk VIs TE614, TE663 and TE771 were modified by Fairey Aviation at Ringway to become TT Mk 6s, and delivered to Koksijde in March 1954. The last of these was retired and scrapped in August 1956.

France

From 1946 onwards, the French Air Force (Armée de l'Air) acquired over 100 Mosquitos, mostly FB Mk VIs, but also a number of T Mk III trainers, NF Mk 30 night fighters and PR Mk XVI photo-reconnaissance aircraft. These served with French units all over the world, the Mosquito FB Mk VIs seeing active service against the Viet-Minh in French Indochina. Groupe de Chasse (GC) 1/3 "Corse" flew their FB Mk VIs to Indochina in January 1947 and began operations which continued until May. Over 340 sorties were flown, before it was realised the climate was having a

deleterious effect on the airframes, so the Squadron was redeployed to Rabat in Morocco and renumbered GC 1/6. The Squadron remained there operating Mosquitos until July 1949. Mosquito FB Mk VIs were also flown by GC 2/6, the descendant of the famous Normandie-Niemen Regiment that had operated Yak-3 fighters with the Soviet Air Force as part of the Free French forces during the Second World War. They later flew the NC.900, the French version of the Focke Wulf Fw-190 before re-equipping with the Mosquito FB Mk VI at Rabat in Morocco and being sent to Indochina. Aside from the FB Mk VIs use in North Africa and Indochina, the Armée de l'Air also used the PR Mk XVI in North Africa, based at Rabat and Agadir in Morocco with GC 1/3 "Lorraine". These photo-reconnaissance aircraft were withdrawn to France and left front-line service in 1953. From February 1951, the majority of France's remaining airworthy Mosquitos were sold to the Israeli Air Force.

Turkey

Another major Mosquito customer was Turkey, who began to order the type in quantity in 1946. The first order was for 108 FB Mk VIs and ten T Mk III trainers, but this was amended in 1947 to include an additional 24 FB Mk VIs to equip two more Squadrons of the Turkish Air Force (Türk Hava Kuvvetleri). Since three aircraft had been lost, these too were replaced, bringing the total deliveries to Turkey to 145 aircraft. The FB Mk VIs were all ex-RAF aircraft, refurbished at Ringway by Fairey's prior to delivery, but the T Mk IIIs were all brand new aircraft, built at Hatfield. All of the FB Mk VIs were fitted with four-bladed propellers during their refurbishment. Aside from the complete airframes, Turkey also purchased a large stock of Mosquito spares, which kept the aircraft in service until 1954 when they were replaced by the Republic F-84 Thunderjet.

Czechoslovakia

When the Second World War ended, a number of the Squadrons that had been serving with the RAF manned by expatriate aircrew returned home. Among these were 310, 311, 312 and 313 Czech Squadrons, which were all moved to Prague in August 1945. All of these Squadrons were disbanded from the RAF during 1946 and became the foundation of the new Czechoslovakian Air Force. In order to help equip the new air force, 24 Mosquito FB Mk VIs and two T Mk IIIs were purchased by the Czech Government and delivered from the UK. The first batch of four FB Mk VIs, MM430, MM431, RF823 and TE603 flew out on 18 December 1946, the rest following in small batches

during 1947. The last two were the two T Mk IIIs, VR347 and VR348, which were delivered on 17 April and 23 June 1948. With changes in the European political climate and the Czechoslovakian coup d'état by the Communist party in February 1948, an arms embargo was put in place by the Western European nations. The Mosquitos, now designated as the B-36 in Czech service, continued to fly with the 24 Bomber and 47th Air Regiment. Spares became increasingly difficult to come by and eventually, German surplus aircraft guns replaced the Hispano cannon. These rearmed aircraft were known as LB-36s. By 1950, the spares situation had become untenable and these aircraft were all replaced in favour of Soviet built types.

Dominican Republic

During 1948, one of the smallest of the overseas customers for the aircraft, the Dominican Republic, purchased five Mosquito FB Mk VIs and a single B Mk 35 for service with the Dominican Military Aviation Corps (Cuerpo de Aviación Militar Dominicana). The Corps, the Air Arm of the Dominican National Army, had been created in 1932 by General Rafael Leonidas Trujillo Molina. This initial batch of aircraft was supplemented with an additional purchase of three ex-Royal Canadian Air Force Mosquito T Mk 29 trainers, KA172, KA206 and KA243 in February 1952. The initial batch of aircraft were purchased in response to a perceived threat from a group of exiled Dominicans living in Cuba. These exiles had formed an air force of their own, and in 1947 threatened to invade Dominica and overthrow the President. The exile's air force was named the potentially confusing Fuerza Aerea del Ejército de la Revolución Americana or FAERA, and had acquired a B-24, two PBY-5A Catalinas, two B-25 Mitchells, two PV-1 Venturas and eight P-38 Lightnings along with five transport aircraft. This was a sufficiently sizeable force for President Trujillo to take seriously, and he attempted to purchase bombers and attack aircraft from a number of sources. The United States refused to sell aircraft to the Dominican Republic, foreseeing that an attack by them on the FAERA could initiate a war with Cuba. The President's agents in the UK successfully agreed the purchase of the first six Mosquitos, refurbished ex-RAF aircraft fitted with four bladed propellers. These were delivered during 1948, entering service alongside ten Bristol Beaufighters that had also been purchased. President Trujillo had also managed to acquire three AT-6 Texan armed trainers from Nicaragua, two B-17s and four P-38L Lightnings as well as three reconnaissance F-5 Lightnings from civilian sources. The Mosquitos and Beaufighters did

see active service with the Dominican Military Aviation Corps, their first engagement being when two Mosquitos and a Beaufighter attacked a FAERA PBY Catalina and two landing craft spotted in Luperon Bay, Dominica on 14 June 1949. The results of this engagement are unclear, 14 aircraft were despatched by FAERA, four were forced to land in Mexico by bad weather, and the rebel forces that actually managed to reach Dominica were decimated by the Mosquitos and Beaufighters, then by the Dominican National Army. Despite this defeat, the rebels re-emerged in Haiti in 1949. Dominican Military Aviation Corps aircraft undertook "air power demonstration" flights over Haiti, to encourage the Haitian Government not to support the rebels. This tense situation encouraged President Trujillo to further strengthen and modernise his forces. However, the Mosquitos remained in service until 1954.

Yugoslavia

The Yugoslavian Air Force (Jugoslovenska Ratno Vazduhoplovstvo or JRV) became a Mosquito customer in October 1951, when the first FB Mk VIs were supplied after negotiations with the UK. Altogether 77 FB Mk VIs and six T Mk III trainers were purchased, along with 60 of a very rare version, the much criticised NF Mk 38. The JRV became the only air force to operate the NF Mk 38, its handling and poor radar system having been deemed unsatisfactory for service with the RAF. The entire force of 143 aircraft were delivered in 1951 and 1952, and served with a variety of JRV units, such as the 32nd Bomber Division at Zagreb and the 88th Bomber Aviation Regiment at Sombor. By 1957, the 88th had begun to replace their Mosquitos with the Ikarus S-49C fighter. The 97th Aviation Regiment had a number of FB Mk VIs converted to carry torpedoes. Both the 103rd and 184th Reconnaissance Aviation Regiments used both NF Mk 38s and FB Mk VIs, the 184th's NF Mk 38s being the last of that version in service when they were retired in 1960. Some FB Mk VIs were converted for target towing duties, and were used by the Zadar anti-aircraft school, and were the last Mosquitos to be retired from the JRV in 1963. In fact, these were the last Mosquito FB Mk VIs in service anywhere in the world.

Israel

As has already been mentioned, the Israeli Air Force (Heyl HaAvir) purchased 63 Mosquitos from the French Air Force, the contract being signed on 17 February 1951. The IAF had recognised the quality and utility of the Mosquito prior to this, and had purchased two ex-USAAF UK-based PR XVIIs, NS811 (civilian

registered G-AIRU) and NS812 (civilian registered G-AIRT), both of which were clandestinely ferried to Israel on 5 July 1948. It has been suggested that G-AIRU crashed into the sea on the way to Israel, but other records show that this aircraft was given the IAF serial D-160, served with Squadron 103, and was written off on 13 January 1957. An interesting conundrum, and not an unusual one among the early aircraft acquired by Israel. The French contract of 1951 was signed with Société Nationale de Constructions Aéronautiques du Nord (SNCAN), later part of Nord Aviation, and Hispano, the cannon manufacturer. This contract covered the refurbishment of 63 former French Air Force Mosquitos, comprising 39 FB Mk VI fighter bombers, 20 NF Mk 30 night fighters and four PR Mk XVI photo reconnaissance aircraft at a total cost of \$387,300. A number of the FB Mk VIs were converted to dual control trainers, and later the contract was expanded by two more aircraft, a pair of former French Air Force T Mk IIIs. The crews for the first aircraft to be delivered were trained by the RAF at Swinderby in Lincolnshire, after this they had the dual control aircraft to train their own pilots. The first Mosquitos delivered to Israel were FB Mk VIs, arriving on 11 June 1951 and forming the basis of Squadron 109, the first unit of the IAF to be so equipped and based at Hatzor. The Squadron operated as a fighter bomber, training and photo reconnaissance unit, as well as flying fighter affiliation exercises with Spitfire and Mustang opponents. Israeli MoD Chief Test Pilot Hugo Marom, a man who had delivered many of the Mosquitos and other aircraft, was appointed to form the second Squadron, 110, again at Hatzor, in August 1953. This initially operated as a photo reconnaissance unit, but was intended to train and then operate night fighters. The photo reconnaissance aircraft became part of Squadron 115 based at Tel-Nof as the night fighter role developed. A number of aircraft were written off in accidents, and at least two broke up in mid-air, but the IAF were convinced of the usefulness of the Mosquito considering their tactical situation, so purchased another batch in 1954. These aircraft were bought from British scrap dealer R A Short, and comprised seven ex-RAF FB Mk VIs and 13 ex-Fleet Air Arm Sea Mosquito TR Mk 33s. These aircraft were refurbished by Eagle Aviation at Blackbushe, the Sea Mosquitos having their radars and arrestor hooks removed. With the introduction of jet aircraft, the Mosquitos started to be withdrawn from service in 1956, some were scrapped and others stored. However, the emergency of the Suez

Crisis (known as the Sinai Campaign in Israel) in October and November of 1956, caused Squadron 110 to be reactivated with Mosquitos, a mixed number of FB Mk VIs and TR Mk 33s. The Mosquitos undertook ground attack mission with bombs, rockets and cannon without loss. After this, the aircraft were fully withdrawn from service.

China

The final military user of the Mosquito is also the most interesting and unlikely one. The Canadian Government sold over 200 war surplus Mosquito FB Mk 26s, T Mk 27s and T Mk 29s to the Nationalist Chinese Air Force in 1947, with deliveries taking place over the course of the following year. The civil war in China between the Nationalists and the Communists started as the Second World War came to an end. The US were supporting the Nationalists and had helped re-organise their air forces, supplying B-24s, B-25s, P-47s and P-51s along with a variety of transport aircraft. The Chinese decided that they needed to build up a reserve force as well, so agreed to the purchase of the Mosquitos from Canada, along with a training programme for air and ground crew. The first Chinese pilots began their training on a fleet of nine refurbished T Mk 27s and 29s at Downsview, Toronto, but once the aircraft began to arrive in China, Canadian instructors took over training at Hankow. The Mosquitos were shipped to Shanghai, then taken to Tanzang, where 179 aircraft had been reassembled by 12 November 1948, at which point the facility had to be abandoned in the face of the advancing Communist forces. A great many Canadian engineers and instructors supported the effort in China, both at Tanzang and Hankow, where much of the training was carried out. The Chinese pilots often had experience only of nosewheel types of aircraft, such as the B-25, so had tremendous difficulty in converting to the tail-wheel high-performance Mosquito. More than 60 of the aircraft delivered were lost in training accidents as a result. The Mosquitos were used by 1 Bombardment Group in action against the Communists, before having to withdraw to Peiping and finally the island of Formosa in December 1948. Several attacks were made against mainland supply depots from the island, now known as Taiwan, but with the Communist takeover in 1949, the Mosquitos were completely withdrawn from service. Only one remains, or at least a portion of it does, in the Beijing Military Aircraft Museum. □



A Mosquito FB Mk VI of the Dominican Military Aviation Corps. Keith Draycott



A Mosquito FB Mk VI of Squadron 109 based at Hatzor. Keith Draycott



Aircrew of 110 Squadron walk past the unit's de Havilland Mosquito VI aircraft lined up on the airfield at Labuan, Borneo, after their handover by the Royal Australian Air Force in January 1946. (Editor's Collection)



Mosquito FB Mk VI of 334 Squadron Royal Norwegian Air Force. (Via C Howell)



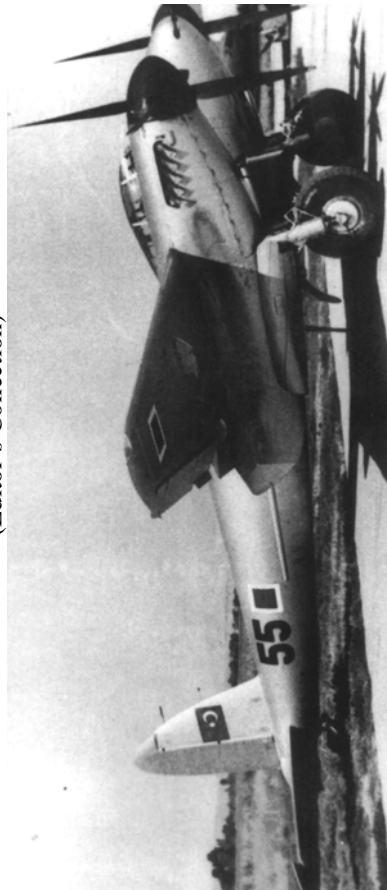
A 1 Squadron Royal Australian Air Force Mosquito FB Mk VI photographed in 1945. (Editor's Collection)



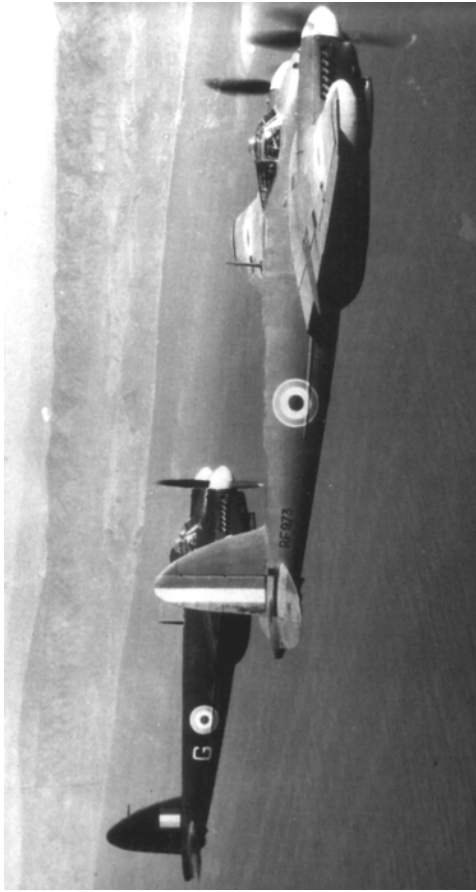
The Swedish Air Force operated the Mosquito NF Mk XIX as the J30. (Editor's Collection)



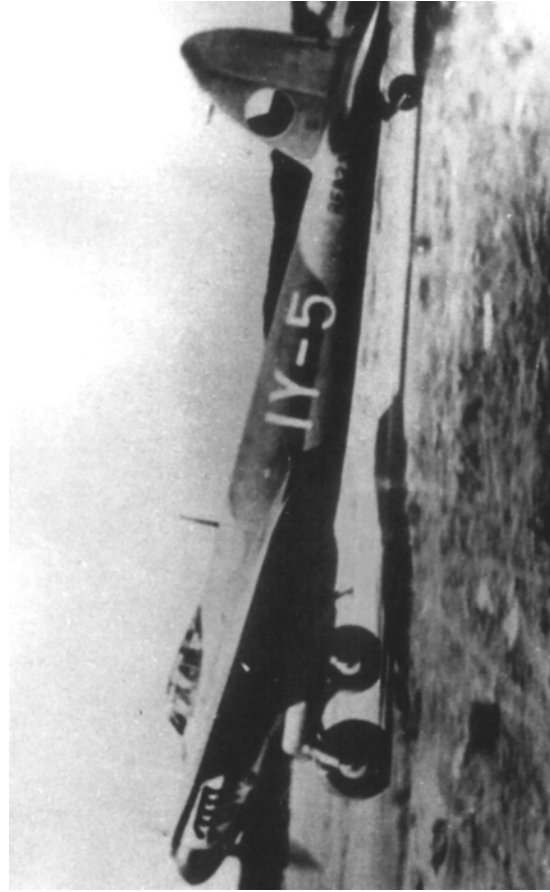
A Mosquito NF Mk 30, MB12, of the Belgian Air Force based at Beauvechain.
(Editor's Collection)



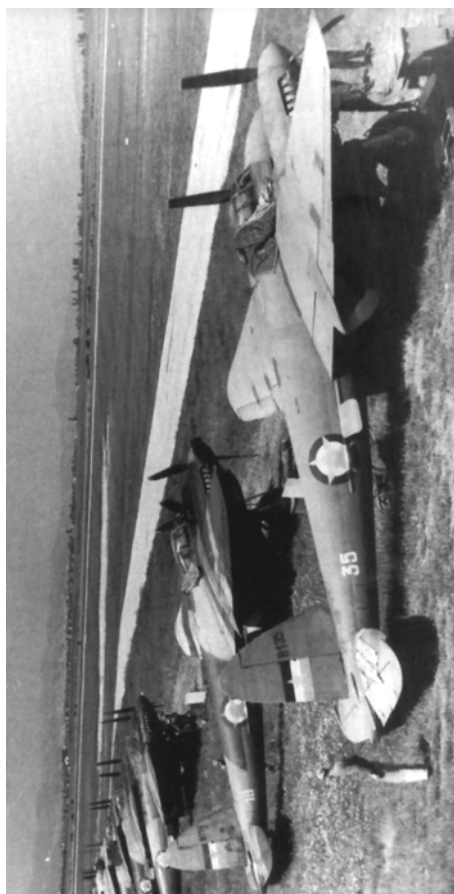
One of the Mosquito FB Mk VIs refurbished with four bladed propellers for service with the Turkish Air Force . (Editor's Collection)



A pair of French Air Force Mosquito PR Mk XVIIs of Groupe de Chasse 1/3 "Lorraine" off the coast of Morocco. (Editor's Collection)



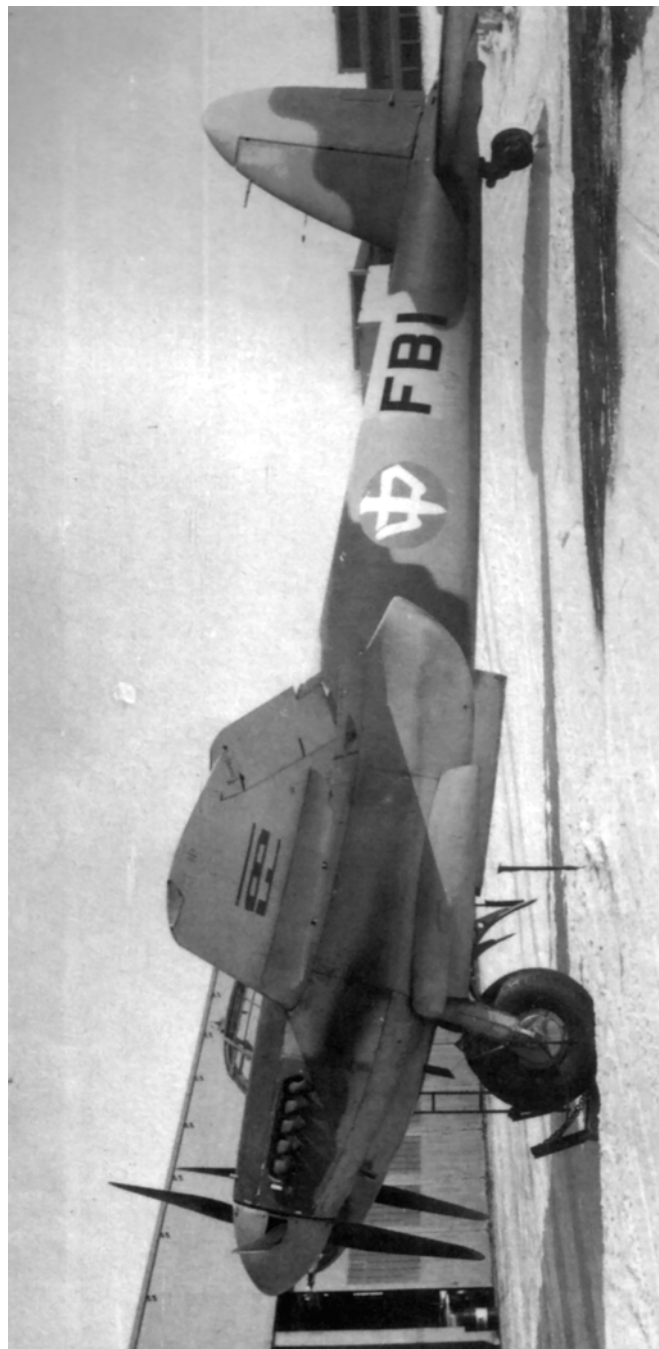
A Mosquito FB Mk VI of the Czech Air Force, which was known as the B-36 in Czech service. (Editor's Collection)



Mosquito FB Mk VIs of the 32nd Bomber Division based at Zagreb, a unit of the Yugoslav Air Force. (Editor's Collection)



A Mosquito PR Mk XVI of the Israeli Air Force.(Editor's Collection)



Several Mosquito T Mk 29s and FB Mk 26s were used at Downsview, Toronto, to train Chinese pilots. This is one of the FB Mk 26s. (Editor's Collection)



Lockheed Martin F-16 Fighting Falcon, by Santiago Rivas. Latin Wings #3.. 52 A-4 pages. Landscape. Soft cover. \$20.00. E-mail jfnpadin@yahoo.com

The only Latin American countries to receive the F-16 were Chile and Venezuela. The Fuerza Aerea de Chile received 10 F-16 (5 F-16C and 5 F-16D) from the US in 2006/07., and 36 upgraded F-16A and F-16B (29 A and 6 F-16B) from the Netherlands in two batches; 11 F-16A and 7 F-16B in 2016/07; 18 F-16A in 2010/11. Venezuela's Fuerza Aerea Bolivariana received 24 F-16 (10 F-16A and 14 F-16B) in 2083/85. Three have been lost in crashes since then.

This latest volume in Jose Nunez's Latin Wings series covers both countries with Spanish text, tables, color photos, and color profile drawings. Don't let the Spanish text discourage you; the summary above was deduced from the text without any knowledge of Spanish.

The chapter breakdown is as follows. Introduccion: 2 pages including 5 photos. Fuerza Aerea de Chile: 14 pages including 40 photos. Aviacion Militar Bolivariana: 12 pages including 31 photos. Tecnica: 7 pages including 23 photos. Tables: 3 pages listing history of individual a/c including 11 photos. Color profile drawings: 7 pages with 11 profiles (Chile 5 & Venezuela 6; plus a plan view), 5 photos, and 10 color unit badges.

This, the third in the Latin Wing series, is another excellent publication from SAFO members Jose Nunez. As usual, it excels in historical content, the sheer number of photos and their "Kodak-quality" reproduction, and beautiful color profile drawings. It is highly recommended for all students of Latin American aviation, all lovers of modern jet aircraft, and just about everyone who appreciates a well-done

aviation book. Latin Wings #3 is available from the SAFCH Sales Service for \$20.00 plus p&p. It can also be obtained directly from the publisher at the e-mail address above.



Les Hydravions à Coque, 1^{ère} partie. Les Ailes Françaises, Encyclopédie des Avions de la Seconde Guerre Mondiale #1. 79 A-4 pages softbound. € 14.00. Published by Artipresse, 119 rue Anatole France, 93170, Bagnole, France. Email: airmagazine@rocketmail.com.

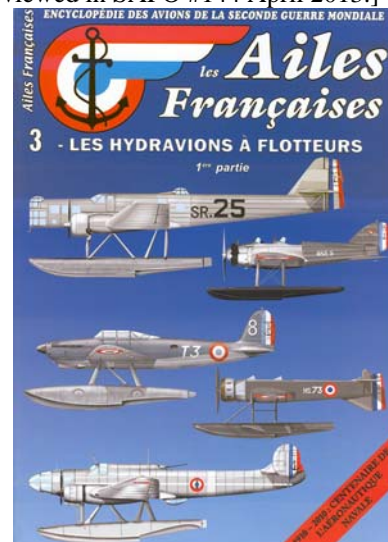
During the 1930s, the French aircraft industry produced some of the most attractive aircraft as well as some of the most bizarre aircraft of the period. Because of the extreme environmental condition in which they had to operate and the unique missions required of them, the aircraft of the Aéronautique Navale were among the most bizarre of all.

This is the first in a series of volumes marking the centennial of the Aéronautique Navale. Volume 1, Part 1, begins the series with the coverage of flying boats. Aircraft covered are: (1) Breguet Short Calcutta. (2) Breguet 521 Bizerte. (3) Breguet 530 Saigon. (4) Breguet 730 Cherbourg. (5) Breguet Nautilus. (6) Breguet 792. (7) CAMS 37. (8) CAMS 55. (9) CAMS 110. (10) Latécoère 301 l'Orza. (11) Latécoère 302. (12) Latécoère 521. (13) Latécoère 522. and (14) Latécoère 523.

Each aircraft is covered by several pages of text covering the aircraft's development and numerous photos well

produced on high-quality paper, one or more beautiful color profile drawings, and a 3-view scale drawing of a quality varying from fair to excellent.

[Ed: The second part of Vol. 1 was reviewed in SAFO #144 April 2013.]



Les Hydravions à Flotteurs, 1^{ère} partie. Les Ailes Françaises, Encyclopédie des Avions de la Seconde Mondiale #3. 77 A-4 pages softbound. € 14.00. Published by Artipresse, 119 rue Anatole France, 93170, Bagnole, France. Email: airmagazine@rocketmail.com.

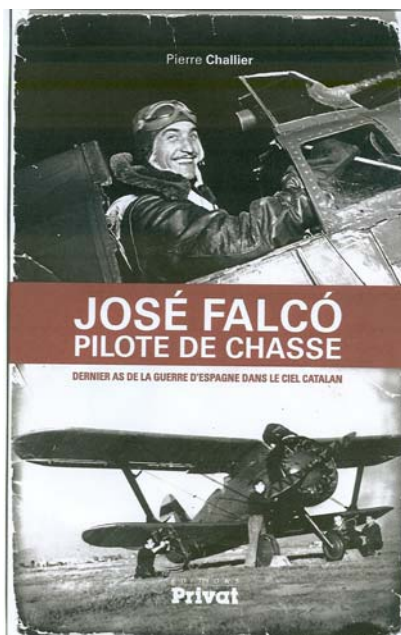
This is the third in the series of volumes marking the centennial of the Aéronautique Navale. This volume is the first part covering float planes. All the comments about the quality of the publication reviewed above apply equally well here.

The aircraft covered are: (1) Besson MB 411. (2) Bloch 210 Hy. (3) Bloch MB 480. (4) Gourdou-Leseurre GL 810-811-812-813 Hy. (5) Gourdou-Leseurre GL832 Hy. (6) Gourdou 120 Hy. (7) Gourdou 130 Hy. (8) Latécoère 290 / 294. (9) Latécoère 298. (10) Levasseur PL 15.

The extent of the coverage varies with the importance of the aircraft's service history. For example, the 86 aircraft of the GL 819 series are given 12 pages, 17 photos, and 4 color profile drawings. The more famous Latécoère 298, of which 129 were built, is given 13 pages, 21 photos, and 2 color profile drawings. On the other hand, only one

Gourdou 120Hy was built, and it is given only 5 pages, 5 photos, and one color profile drawing,

Although France is not a “small” country, the Aéronautique Navale qualifies as a small air force, both for the small number of aircraft used and the relative obscurity of these aircraft outside of France. This series of books on the Aéronautique Navale is recommended for anyone loving unusual aircraft described in a series of outstanding books. And, the price is a real bargain.



José Falcó, Pilote De Chasse: Dernier as de la Guerre d'Espagne dans le ciel catalan, by Pierre Challier, (Editions Privat: Toulouse, France. (2013) 181pages, illustrated with 19 black & white and 3 color photos and one color aircraft profile; 13,207 copies printed; 19.50 Euros (paperback); ISBN: 9782-7089-56230). In French.

José Falcó Sanmartin's February 6, 1939, epic air battles against Messerschmitt Bf 109E's, while he was flying a Polikarpov I-15 biplane fighter from the Vilajuiga (Catalonia) Airfield, made him famous. His night and day combats with Aviazione Legionaria and Legion Condor aircraft during the previous 10 months are only slightly less well known. M. Challier, himself a pilot, describes these encounters including excerpts from 2011 interviews with the then 95 year old Falcó.

Very little has been published about this fighter pilot's life before and after the Spanish Civil War. In this volume, for

the first time, one may read a complete account of Falcó's youth in an honest, working-class family that lived at the edge of Barcelona's red-light district during the 1920's and 1930's. And one may learn of José's multiple exiles following the Spanish Civil War: in French Concentration Camps, in Algeria after a late-1939 escape, and back in France in 1962.

Challier also writes of José's religious faith, family life, his work as an aviation mechanic, and his decades-long efforts with other Loyalist Veterans to reestablish and then improve Spanish Democracy.

José Falcó, Pilote De Chasse is a fascinating biography of an extraordinary, though modest, human being.

Addenda: Jean-François Micheletti made a superb model of Falcó's 3a Escuadrilla converted night fighter coded CA-058 (color profiled on the rear cover of Challier's biography).

Thomas Sarbaugh (SAFCH #497), USA.



RAAF Colours Schemes & Markings, 1921-1951. Aviation History Colouring Book #78. 24 A-4 pages. Softbound. Ian K. Baker, 31A Mercer St., Queenscliff, VIC. 3225, Australia. E-mail: ianbaker@arc.net.au.

As usual in this series, the coverage begins with a 3-page summary of the RAAF's contribution to the war in the South West Pacific for 1945-1945, including a revealing look at the home front. The next section, “Colour Schemes and Markings”, is mostly about the instructions to convert all aircraft to a

bare-metal scheme, and the objections to this from front-line units. Seven pages are devoted to the RAAF Mosquitos including three 3-view drawings and 5 profile drawings. The remainder of this issue covers, in addition to ‘Advice, Corrections & Addenda’, drawings of an unused Beaufort scheme and drawings of two RAAF Kingfishers challenging the accepted interpretation that they were bare metal but were actually painted silver.



RAAF Colours Schemes & Markings, 1921-1951. Aviation History Colouring Book #79. 24 A-4 pages. Softbound. Ian K. Baker, 31A Mercer St., Queenscliff, VIC. 3225, Australia. E-mail: ianbaker@arc.net.au.

The first two pages covers the RAAF from the beginning of 1945 to the end of the Pacific War. The rest of the issue is “Some Colour Schemes & Markings of Special Interest” for this period. RAAF aircraft illustrated with either a profile drawing or a multi-view drawing are: Beaufighter (2), P-40N Kittyhawk (4), A-20A Boston, A-20G Boston (2), PBY-5A Catalina, B-34 Ventura (4), C-47 Dakota, Sunderland (2), PBM-2 Mariner (2), B-25 Mitchel (2), and Spitfire LF Mk VIII (2).

These two issues of the Aviation History Colouring Book (and previous issues) are highly recommended to historians, illustrators, and modelers interested in accurate color schemes and markings for RAAF aircraft. They are obtainable directly from the author at the addresses above or from specialized book shops around the world.

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"The **Iranian Aviation Review** is an excellent publication and perfect for SAFO's readers. It is the world's most comprehensive source for past and present military and commercial aviation of Iran. Each time I receive an issue I marvel at the quality of the paper and printing, enjoy the subjects, and admire the beautiful color profiles. Each issue has 32 pages in full color, and the subjects are always varied: old and new, military and civil. Each issue also has a section with the latest news from Iran.

"I can not say how highly I recommend this publication to anyone and especially to SAFO's readers and modellers.

"The eight issues published so far are: (CP means one or more colour profiles related to the subject.) #1. Iranian Naval aviation (including hovercraft!). F-84G (CP). Iranian Airways. Junkers in Persia. Gendarmerie Aviation (CP). #2. Police aviation. Junkers. Iranian Airways. F-4D (CP). IRIAF 2010. #3. Ambulance/rescue aviation. Su-24MK (CP). Breguet/Spad/Potez (CP). Iranian Airways (CP). #4. Oil industry aviation. P-3F (CP). Avro 504/U-1. Iranian Airways/Viscount (CP). #5. Oil industry aviation. Naft Airlines. Persian Air Services (CP). DH9/DH9A. F-5A/B (CP). #6. Civil Aviation Organisation. Cessna O-2A (CP). Iran National Airlines (CP). HH-43 (CP). Junkers (CP several types). #7. Golden Crown display team (CP). Iran National Airlines (CP). Tiger Moth. Fokker F.27 (CP). Lennart Andersson (SAFCH #68) Sweden.

Iranian Aviation Review #8. 32 pages (11 5/8 inches by 8 3/4 inches). All color.

Entirely in English. \$12.00 per issue. Website: www.iranianaviation.com.

Lennart Andersson's comments above are right on target. The publisher has tapped the open literature for fascinating information on Persian/Iranian aviation both military and civil. Let's look at the contents of issue #8 in some detail:

This issue begins with 2 pages of "News & Updates": Dezful Open House, Graduation Ceremony, Kish Air Show, Experimental Camo, Project Armita, IRAn-140 MP Variant, Quite 707, Aseman Airlines, & Mahan Air News; includes 19 color photos. Next is "Kish Air: Iran's vacation Airline" with 8 pages including 35 color photos and 'all-time' fleet list. The main article, "Chenfsu F-7 AirGuard" occupies 7 pages including 23 color photos, 4 color profile drawings, and a table of 'Known Serial Numbers'. Next it's back to civil aviation with "Iran National Air Lines; part 3; Into the Golden Age" with 4 pages including 10 color photos. "Iran Civil Helicopters – part 1" is one page with a table and one photo covering each of five types. "Timeline of Aviation in Iran – part 8 - The 1930's Aviation in Persia between the Wars" describes the Persian Hawker Fury and Audax: with 9 pages, 22 photos, and 4 color profile drawings (Hornet Fury, Mercury Fury, Hornet Audax & Pegasus Audax).

I would be remiss not to comment on the quality of the color profiles. Drawn by the publisher, Leon Manoucherians, they are large, exquisitely detailed and in brilliant color. I have only one quibble: many of the photos are too small, being reduced to fit the 3-column format.

The publisher started the magazine with the intention of publishing monthly. However, he quickly found this a difficult schedule to maintain, so he shifted to a more manageable quarterly schedule. His website (www.iranaviation.com) needs updating; while the price for a single issue is correctly given as \$12.00 plus p&p, a year's subscription is listed as \$120 plus p&p.

Iranian Aviation Review is an amazing source of information on an air force that is virtually ignored by the

Western press. Order one issue, and you'll want them all.



AirMagazine #54, Novembre/Decembre 2011. Artipresse, 119 rue Anatole France, 93170, Bagnolet, France. € 8.00. Email: airmagazine@rocketmail.com.

It has been a long time since I have had the pleasure of reviewing this excellent magazine. Check out the contents of this recently-received 68-page back issue:

"Le PZL P.24: Développement d'un chasseur destiné à l'exportation (1^{ère} partie)" 5 pages including 8 photos and a 2-view color drawing of 'SP-BFL' as displayed at the 1936 Paris Exposition. "Le P.24B en Bulgarie (1^{ère} partie)" 4 pages including 5 photos, 3 color profile drawings. [Ed: I learned that the Bulgarian fuselage numbers '11', '22', & '33' designated the 1st, 2nd, and 3rd *Istrebitein Jato* (Fighter Squadrons). "Amiot 123 polonais" 8 pages on a Polish trans-Atlantic attempt including 10 photos, a 3-view color drawing of Amiot 123.01, and a color profile drawing of 123.02 – both in Polish AF colors. Both attempts failed. "Le Douglas DC-5" 18 pages including 27 photos, a 1/125-scale 3-view drawing, 3 two-view drawings (in Japanese markings, camouflaged USMC, & silver MSMC), and 12 color profile drawings [prototype, William Boeing's a/c, Dutch civil (4), USAC, Israel (2), USN, & USMC (2)]. "Mohawk en Argentine" 11 pages on the Grumman a/c including 20 photos and table listing individual a/c. "Le saga du Sabre 6" 12 pages on the Sabre 6 in Portugal, Canada, and West Germany including 11 photos, and one color profile drawing (Portugal).

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Linden Hill Decals has released seven new decal sets for the MiG-21 and MiG-29 that should be of interest to all modelers of the small air forces. As usual for LHD, the subjects have been meticulously researched and the decals are excellent in color and registration. The multi-page instruction sheets show port, starboard, and plan views of all aircraft in full color, in addition to an informative history of the subject aircraft. Most sets are available in the usual standard scales.



MiG-29 Part 1. The late 9-12 series. Linden Hill Decals LHD48032. \$21.99.

Three sheets of decals (two 95 mm by 190 mm and one 95 mm by 100 mm) provide the markings for 12 MiG-29 (1 Eritrea, 2 Kazakhstan, 5 Russia, 2 USSR, & 2 Ukraine.). The six-page instruction

booklet has port, starboard, and plan views in color for all 12 MiG-29.



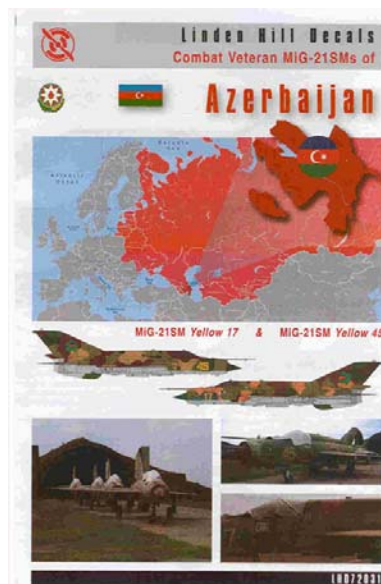
MiG-29 Part 2. The late 9-13 series. Linden Hill Decals LHD48033. \$22.99.

This set consists of 5 decal sheets (two 95 mm by 190 mm, one 95 mm by 150 mm, one 95 mm by 90 mm, and one 95 mm by 50 mm). They provide the national insignia and markings for 19 MiG-29 (1 Azerbaijan, 2 Belarus, 1 Moldova, 3 Russia, 3 Turkmenistan, 6 Ukraine, 1 USSR, & 2 Uzbekistan). The six-page instruction booklet has port, starboard, and plan views in color for all 19 MiG-29.

Combat Veteran MiG-21SMs of Azerbaijan. Linden Hill Decals. \$8.00.

The small decal sheet (6.5 mm by 3.5 mm) provides all the nation insignia and serial numbers to build one of the

MiG-21SMs that participated in the Azerbaijan/Armenia conflict over the Nagorno-Karabakh in 1991-1994. The full-color instruction sheet provides color drawings of port, starboard, and plan views for yellow "17" and yellow "45". This decal set is also available as LHD48031 for \$8.00 and LHD32019 for \$9.00.



The review sets the decals reviewed above are available from the SAFCH Sales Service safo@redshift.com. These and all other LHD decals can also be ordered directly from Linden Hill Decals contact@lindenhillimports.com.

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[Editor: The following exchange of email correspondence between Frits Gerdessen (SAFCH #12) and Dan Hagedorn (SAFCH #394) illustrates to best of the SAFCH.]

"Dear Dan, One of our young aviation enthusiasts, Jan Grinich, is writing a book on the Fokker fighters D.IX to D.XX. As Jan is a promising and serious researcher, he deserves support, and must be considered as one of the successors of my (and your) generation.

"There is still uncertainty whether Fokker supplied the D.XI fighter to Argentina. I once heard there were 6, R-66/71, but have serious doubts. Therefore, I would like to

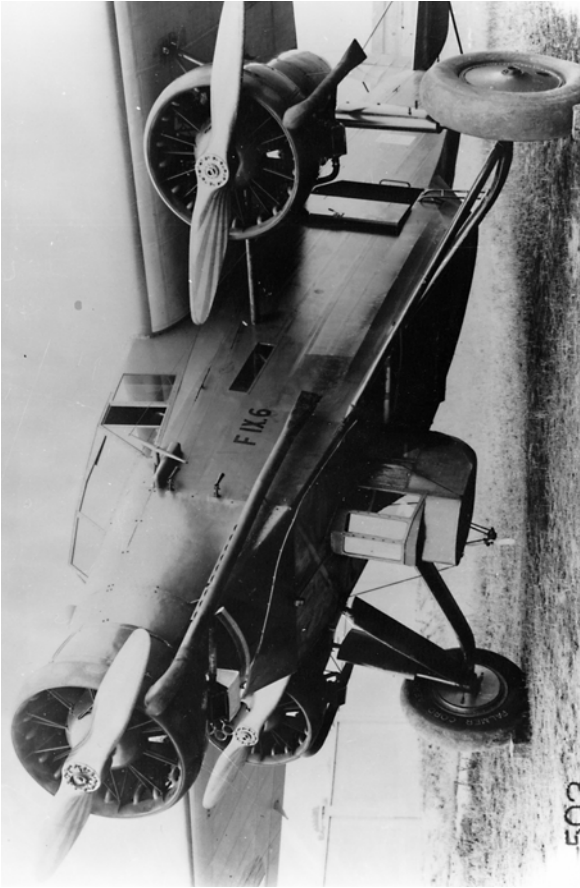
know your opinion. Is there information about the fate of the Fokker C.IV and S.III used in Argentina (apart of Zanni's aircraft).

"I suppose no further info has come up about the cancelled Paraguayan order for the Fokker C.V. Bolivia had received a quotation for the Fokker C.XII operational trainer, but that came to nothing. Frits."

"Good Morning Frits, This is very encouraging news, as I am distinctly aware that we need to be thinking about 'passing the torch' to the next generation of aero historians. I wish Jan well.

"I can assure you that no D.XI's went to Argentina. If anything at all happened, one may have been demonstrated there, but even that seems to defy confirmation. Likewise, I cannot confirm any other Dutch-built Fokker aircraft in Argentina (other than Zanni's two aircraft), and am not aware of any S.IIIs that went there; none even appear on the Argentine civil register, let alone military.

"Nothing new has turned up on the Paraguayan interest in the C.V. There may have been diplomatic correspondence or a visit to the factory, but even that cannot be verified. Dan."



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